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MERRILL - PALMER

QUARTERLY

behavior and development

July 1960

Volume 6 Number 4

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The *Quarterly* is published four times yearly by The Merrill-Palmer Institute, 71 E. Ferry Avenue, Detroit 2, Michigan. Subscription rates: one year, \$3.00; two years, \$5.50; three years, \$8.00. Single copies, \$1.00.

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MERRILL-PALMER

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Behavior and Development

Volume 6, No. 4

July, 1960

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SEX DIFFERENCES IN ADOLESCENT CHARACTER PROCESSES¹

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According to psychoanalytic theory, adolescence represents a recapitulation of the Oedipus conflict. The relative calm and control achieved during latency suffer a disruption at this point because of the re-emergence of intense sexual impulses, and the child is plunged once more into Oedipal conflict.

Several critical new features mark this re-enactment of the Oedipal drama, however, and distinguish it from its earlier counterpart. The ego of the puberal child, enriched and articulated during latency, is in a more advantageous position in relation to the impulses than it was in the Oedipal phase. For during its struggle with impulses the ego has gained an ally in the agency of the super-ego. And the fact of genital capability opens for the child new possibilities for resolving conflict. The male child need not simply repress his love for the mother and gain mastery of his ambivalence and fears through identification. He may now seek substitutes for the mother, substitutes who are suitable love objects. Though he may identify with the father in a more or less differentiated fashion, he need not use identification as a global defense against overpowering fear of the rival father, since the father is no longer his rival in the same crucial way.

Part of the outcome of the adolescent struggle is the renegotiation of the ego—super-ego compact: that is, a change in character. As part of the process of remodeling his original identifications, the child establishes a set of values and controls which are more internal and personal than earlier ones and which reflect his new reality situation as an adult.

This is the developmental task and context facing the adolescent boy. But what of the task confronting the girl at this period? With what resources and what history does she enter adolescence? Analytic theory, though wanting in specificity, gives us some broad clues about this development, its unique characteristics, and the ways in which it differs from development in the male child.

First, we expect that super-ego is less developed in women (and in adolescent girls). Since the little girl has no decisive motive force comparable to the boy's castration anxiety, she does not turn peremptorily

¹ This article is based on a paper read at the American Psychological Association meetings, September, 1957.

against her own instinctual wishes nor form the same critical and definite identification with the like-sexed parent. Her motives for internalizing the wishes of important adults are fear of loss of love and a sense of shame. According to Deutsch (1), an important step in the socialization of girls occurs when the father enters an agreement with the little girl whereby he exchanges a promise of love for her forfeiture of any direct expression of aggressive impulses.

A significant difference may be noted at this point: the boy who has accomplished the Oedipal resolution now has an *internal* representative of the parents which he must placate and which serves as a source of reinforcement for his acts. The little girl, on the other hand, continues to look to the parents as the source of reward and punishment since her identifications are only partial and primitive.

At adolescence this difference has a critical significance: the boy enters the adolescent contest with an ego that is reinforced by a strong ally, a vigorous super-ego. And in reworking the relation between the ego and the impulses, there is an internal criterion by which the boy judges the new arrangement. His new values and controls are an individual accomplishment and are judged, at least in part, by individual standards. The girl meets the rearoused instincts of adolescence with an ego only poorly supported by partial identifications and introjects. She still needs to rely heavily on externally imposed standards to help in her struggle with impulses.

With this formulation as a starting point, we made a number of predictions about sex differences in character development and looked at data from two national sample surveys of boys and girls in the 14 to 16 year age group for tests of our predictions.² Specifically, we explored the following conceptions:

1. Adolescent girls will show less concern with values and with developing behavior controls than will boys; that is, character will show rapid development in boys during adolescence, while girls will be less preoccupied with establishing personal, individual standards and values.

2. Personal integration around moral values, though crucial in the adjustment of adolescent boys, will not predict adjustment in girls. Rather, sensitivity and skill in interpersonal relationships will be critical integrative variables in adolescent girls and will predict their personal adjustment.

Our studies yield substantial support for the first speculation. Girls are consciously less concerned about developing independent controls than

² The studies were conducted at the Survey Research Center of the University of Michigan. Respondents were selected in a multistage probability sampling design, and represent youngsters of the appropriate age in school. Each subject was interviewed at school by a member of the Center's Field Staff; interviews followed a fixed schedule and lasted from one to four hours. For details about the studies, and copies of the complete questionnaire, readers may refer to the basic reports (2, 3).

boys are. They are more likely to show an unquestioned identification with, and acceptance of, parental regulation. They less often distinguish parents' standards from their own, and they do not view the parents' rules as external or inhibiting as often as boys do. Boys more often tell us they worry about controls—particularly controls on aggression; when we ask them what they would like to change about themselves, the issue of controls again emerges as an important source of concern. More important, perhaps, as evidence of their greater involvement in building controls, we find that boys tend to conceive parental rules as distinctly external, and, to some extent, opposed to their own interests. So when we ask why parents make rules, boys underscore the need to control children (e.g., to keep them out of trouble). Girls reveal an identification with the parents when they say that parents make rules to teach their children how to behave, to give them standards to live by, to let children know what is expected of them. Boys think of rules as a means of restricting areas of negative behavior, while girls more often see them as a means of directing and channeling energy.

In answer to all of our questions about parental rules, boys repeatedly reveal greater differentiation between their own and their parents' standards.³

One of the most impressive indications of the difference between boys and girls in their stance toward authority comes from a series of projective picture-story questions. At one point in this series a boy or girl is shown with his parents, and the parents are setting a limit for the child. We asked respondents to tell what the child would say. A quarter of the boys questioned the parental restriction—not with hostility or any sign of real conflict, but with a freedom that implies a right to question—while only 4 per cent of the girls in the same age group responded in this way. On the other hand, a third of the girls reassured the parents with phrases like "don't worry," or "you know I'll behave, I'll act like a lady"; the boys almost never gave answers comparable to these.

Both of these response types reveal a respect for one's own opinions. They both indicate autonomy, but very different attitudes toward parental rules: the boy openly opposes; the girl not only acquiesces to, but reinforces the parents' regulation.

Girls are more authority reliant than boys in their attitudes toward adults other than their parents. And we find lower correlations among internalization items for girls, indicating less coherence in internalization for them than for boys.

³ In the full series, we asked respondents why parents make rules, what would happen if they didn't, when a boy might break a rule, whether the respondent himself had ever broken a rule, and what kind of rule he would never break. For exact phrasing and order of questions, the reader may refer to the basic study reports (2, 3).

These are examples of differences that support the claim that boys are actively struggling with the issue of controls, that they are moving in a process of thrust and counterthrust toward the construction of personal, individuated control systems more conscious and rational than previous global identifications; and that girls, on the other hand, are relatively uninvolved in this struggle and maintain a compliant-dependent relationship with their parents.

The second hypothesis suggested at the beginning of this paper deals with the significance of progress in internalization for the personal integration and adjustment of boys and girls. Having found that girls are less urgently struggling for independent character, we wonder what this means about their general ego development and integration. Are girls relatively undeveloped in these areas as well as in independence of character?

The analysis we have done to date indicates that the second alternative is at least a viable hypothesis. In an analysis of extreme groups, we find that the well-internalized boy is characterized by active achievement strivings, independence of judgment, a high level of energy for use in work and play, and self-confidence combined with realistic self-criticism. He is well developed in the more subtle ego qualities of organization of thought and time-binding. The boy who has not achieved internal, personal controls and who responds only to external authority is poorly integrated, demoralized, and deficient in all areas of advanced ego functioning (Table 1).

TABLE 1
EXTREME GROUPS ON AN INTERNALIZATION INDEX COMPARED ON MEASURES
OF OTHER EGO VARIABLES (BOY SAMPLE)

Selected Measures of Ego Variables	Internalization Index		Chi Square	P Level
	High	Low		
I. ACHIEVEMENT				
a. prefer success to security	.64	.47	8.140	< .01
b. choose job aspiration on achievement criteria	.78	.62	9.331	< .01
c. choose job aspiration because of ease of acquiring job, minimum demands	.01	.13	13.758	< .001
d. upward mobile aspirations	.70	.53	7.158	< .01
II. ENERGY LEVEL				
a. high on index of leisure engagements	.49	.40	2.729	< .10 > .05
b. belong to some organized group	.77	.65	5.50	< .05
c. hold jobs	.63	.42	12.576	< .01
d. date	.66	.52	6.007	< .05

TABLE 1 (Continued)

Selected Measures of Ego Variables	Internalization Index		Chi Square	P Level
	High	Low		
III. AUTONOMY				
a. rely on own judgment in issues of taste and behavior	.40	.20	12.786	< .01
b. have some disagreements with parents	.67	.49	12.804	< .01
c. choose adult ideal outside family	.23	.14	4.547	< .05
d. have no adult ideal	.07	.16	8.621	< .01
e. authority reliant in relation to adult leaders	.23	.54	28.544	< .001
IV. SELF-CONFIDENCE				
a. high on interviewer rating of confidence	.43	.22	11.213	< .01
b. low on interviewer rating of confidence	.16	.35	14.205	< .001
c. high on rating for organization of ideas	.65	.43	9.861	< .01
d. low on rating for organization of ideas	.08	.28	19.006	< .001
V. SELF-CRITICISM				
a. wish for changes that can be effected by individual effort	.36	.12	16.22	< .001
b. wish for changes that cannot be effected by individual effort	.14	.30	12.613	< .01
c. no self-change desired	.27	.42	7.498	< .05
VI. TIME PERSPECTIVE				
a. extended	.44	.28	7.604	< .05
b. restricted	.14	.33	15.721	< .01

Note.—The Internalization Index is based on responses to three questions: (a) What would happen if parents didn't make rules? (b) When might a boy (girl) break a rule? (c) one of the picture-story items: What does the boy (girl) do (when pressed by peers to ignore a promise to parents)? External responses are those which see children obeying only out of fear, breaking rules when they think they will not be caught, relying exclusively on externally imposed guides. Internal responses, in contrast, reveal a sense of obligation or trust about promises given, consider rules unbreakable except in emergencies or when they are for some other reason less critical than other circumstances, and think that children would rely on their own judgment were parental authority no longer available. Subjects who gave internal responses to two or three questions are included in the High category; those who gave two or more external responses are grouped in the Low Internalization category.

Again, we ask, what does girls' relatively common reliance on external controls mean about their ego integration? We find when we analyze extreme groups of girls that internalization of individual controls is no guarantee of ego development, and that girls who are dependent on external controls do not show the disintegration and demoralization that mark the

noninternalized boy. In short, internalization of independent standards is not an efficient predictor of ego organization or ego strength in girls.

There are several possible explanations for this absence of significant association in girls. High internalization in girls may not reflect independence of standards. Deutsch (1) has observed girls' greater capacity for intense identification, compared to boys; and we may have in the girls' apparently well-internalized controls a product of fusion with parental standards rather than a differentiated and independent character. Moreover, dependence on external standards is the norm for girls in adolescence. Parents are permitted and encouraged to maintain close supervision of the growing girl's actions. Under these circumstances, compliance with external authority is less likely to reflect personal pathology or a pathological family structure.

To this point, then, we have seen that girls are less absorbed with the issue of controls, and that the successful internalization of controls is less crucial for their integration at this age than it is for boys.

We speculated that the critical integrating variable for the girl is her progress in developing interpersonal skill and sensitivity. A striking continuity in feminine psychology lies in the means of meeting developmental crises. In childhood, adolescence, and adulthood the female's central motive is a desire for love, and her means of handling crises is to appeal for support and love from important persons in her environment. This contrasts with the greater variety of methods—of mastery and withdrawal—that the male uses in meeting developmental stresses. The girl's skill in pleading her cause with others, in attracting and holding affection, is more critical to her successful adaptation.

We designed a test of the importance of interpersonal development in boys and girls. Again, taking extreme groups, those who reveal relatively mature attitudes and skills in the area of friendship and those who are impressively immature, we compared performance in other areas of ego development. With girls we found clear relationships between interpersonal development and the following ego variables: energy level, self-confidence, time-perspective and organization of ideas, and positive feminine identification (Table 2).

Interpersonal skill in boys is not significantly related to activity level, time-binding, self-confidence, or self-acceptance. In short, it does not assert the same key influence in the ego integration of boys that it does in feminine development.

What significance do these findings have? What are the sources of the differences we have observed, and what do they mean about the later settlement of character issues in the two sexes in adulthood?

Differences in character processes in boys and girls probably reflect both basic constitutional and developmental differences between the sexes and also variation in the culture's statement of character crises for boys and girls.

TABLE 2

EXTREME GROUPS ON AN INTERPERSONAL DEVELOPMENT INDEX COMPARED ON MEASURES OF OTHER EGO VARIABLES (GIRL SAMPLE)

Selected Measures of Ego Variables	Interpersonal Development Index		Chi Square	P Level
	High	Low		
I. ENERGY LEVEL				
a. high on index of leisure engagements	.41	.27	9.335	< .01
b. belong to some or- ganized group	.97	.75	37.012	< .001
c. hold jobs	.60	.51	2.444	< .10 > .05
d. date	.81	.66	10.98	< .01
II. SELF-CONFIDENCE				
a. high on interviewer rating of confidence	.47	.32	9.071	< .01
b. low on interviewer rating of confidence	.17	.30	11.522	< .01
c. high on interviewer rating for poise	.38	.14	29.613	< .001
d. low on interviewer rating for poise	.14	.29	15.072	< .001
III. TIME PERSPECTIVE				
a. extended	.50	.37	8.621	< .01
b. restricted	.04	.13	12.714	< .01
IV. ORGANIZATION OF IDEAS				
a. high on interviewer rating	.51	.34	12.401	< .01
b. low on interviewer rating	.14	.28	13.168	< .001
V. FEMININE IDENTIFICATION				
a. high on index of traditional feminine orientation	.37	.11	37.93	< .001
b. choose own mother as an ideal	.48	.30	14.14	< .001

Note.—The Interpersonal Development Index is based on responses to three questions: (a) Can a friend ever be as close as a family member? (b) What should a friend be or be like? (c) What makes a girl (boy) popular with other girls (boys)? Answers counted highly developed are those that stress intimacy, mutuality, and appreciation of individuality and individual differences. Our High category consists of subjects who gave such answers to all three questions. The Low group comprises youngsters who gave no such answers to any of the three critical items.

Perhaps the most crucial factor leading to boys' precocity in moral development is the more intense and imperious nature of the impulses they must handle. The sexual impulses aroused in the boy at puberty are specific and demanding and push to the forefront the need for personal controls which accommodate his sexual needs. Acceptance of parental standards or maintenance of the early identification-based control would

require denial of sexual impulses, and this is simply not possible for the boy after puberty.

The girl's impulses, on the other hand, are both more ambiguous and more subject to primitive repressive defenses. She has abandoned aggressive impulses at an earlier phase of development and may continue to deny them. Her sexual impulses are more diffuse than the boy's and can also more readily submit to the control of parents and to the denial this submission may imply.

The ambiguity of female sexual impulses permits adherence to earlier forms of control and also makes this a comfortable course since their diffusion and mystery implies a greater danger of overwhelming the incompletely formed ego at adolescence. Freud noted the wave of repression that occurs in females at puberty and contrasted it to the psychic situation of the boy (5).

Additional factors leading to postponement of character issues in girls are their greater general passivity and their more common tendency toward intensive identifications in adolescence and toward fantasy gratification of impulses.

I would like to mention one final point which, I think, has critical implications for character development in girls. Building independent standards and controls (i.e., settling an independent character) is part of the broader crisis of defining personal identity. In our culture there is not nearly as much pressure on girls as on boys to meet the identity challenge during the adolescent years. In fact, there is a real pressure on the girl *not* to make any clear settlement in her identity until considerably later. We are all familiar with the neurotic woman who, even in adulthood, staunchly resists any commitment that might lead to self-definition and investment in a personal identity, for fear of restricting the range of men for whom she is a potential marriage choice. This pattern, it seems, reflects forces that are felt more or less by most girls in our culture. They are to remain fluid and malleable in personal identity in order to adapt to the needs of the men they marry. Too clear a self-definition during adolescence may be maladaptive. But when broader identity issues are postponed, the issues that might lead to differentiation of standards and values are also postponed. I do not, then, feel with Pope that most women have no character at all. I do think that in all likelihood feminine character develops later than masculine character, and that adolescence—the period we ordinarily consider *par excellence* the time for consolidation of character—is a more dramatic time for boys than for girls.

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THE EFFECT OF FATHER-ABSENCE DURING EARLY CHILDHOOD UPON THE OEDIPAL SITUATION AS REFLECTED IN YOUNG ADULTS

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The experimental study of many psychoanalytic concepts has been difficult because the manipulation of the life experiences of human beings must of necessity be limited. To utilize human subjects under conditions as they occur in the natural course of events would be most satisfactory, but the occurrence of such usable conditions is rare. The present study is an attempt to take advantage of such a fortuitous combination of circumstances.

With the emergence and rapid growth of sociology and anthropology as independent disciplines, a number of followers of Freud, later identified as neo-Freudians, became dissatisfied with certain of his concepts. They attempted to understand the development of the child in terms of growth continuously affected by interpersonal relationships provided by the culture. In incorporating these sociological principles into the framework of psychoanalytic theory, the neo-Freudians rejected or minimized certain of the Freudian postulates, one of which is the role of the Oedipal complex in psychosexual development.

The Oedipal conflict is said by the Freudians to be resolved when the boy gives up his mother as object choice and identifies with his father. Various studies deal with the effects of father-absence on childhood development (4, 5, 6, 7), but none of these represents a systematic attempt to study the effects of the father's unavailability on the resolution of the Oedipal conflict.

During World War II, many fathers were called into the armed forces and were away during the period when their sons were, according to analytic theory, working through the Oedipal complex. With the father away from home, the boy was left in undisputed possession of the field so that his yearning for his mother could be indulged without experiencing the castration anxiety which he would have felt were his father present. Such an environment would be fertile ground for excessive gratification and overindulgence of the boy's desire for his mother—a situation which fulfills the criteria (3) for circumstances which may lead to fixation at a particular level of psychosexual development.

It can thus be hypothesized that if the father is not available to play his role at this time, there will be inadequate resolution of the conflict.

The orthodox Freudians believe that an inadequately resolved Oedipal conflict will leave a permanent effect on adult personality. If this is valid, and the boys whose fathers were separated from them during the Oedipal period have been unsuccessful in resolving the Oedipal conflict, they should now, as young adults, show evidences of it.

SUBJECTS

The subjects for this study were Michigan State University freshmen. The experimental group consisted of 33 male students whose fathers were overseas with the armed forces during World War II and were separated from their sons for at least the period when the subjects were between the ages of three and five. A group of 29 male subjects whose fathers did not serve in the armed forces was chosen as a control group.

HYPOTHESES

Four hypotheses were formulated on the basis of psychoanalytic theory:

Hypothesis I. More of the experimental subjects, as compared to the control subjects, will maintain a strong attachment to the mother.

In resolving the Oedipal conflict the boy renounces his mother as an object choice because of castration fear and identifies with his father. If the father is not present during the Oedipal period, the boy will have no need to renounce his mother as an object choice, and as an adult will still maintain her as an excessively cathected object.

Hypothesis II. Fewer of the experimental subjects, as compared to the control subjects, will show strong castration anxiety.

The mother is said to be renounced as a love object because of threatened castration. If there is no father to act as a threat, the boy will not develop castration anxiety in relation to his Oedipal wishes.

Hypothesis III. Fewer of the experimental subjects, as compared to the control subjects, will show strong identification with the father; and identification of the experimental subjects will be more diffuse than that of the control subjects.

The Oedipal conflict is resolved when the boy identifies with his father. If there is no father for the boy to identify with, his identification will be diffuse and extend to other significant figures, including feminine ones.

Hypothesis IV. Fewer of the experimental subjects, as compared to the control subjects, will choose their fathers for their ego-ideals. More of the experimental subjects, as compared to the control subjects, will feel that their fathers are inferior to their ego-ideals.

If identification with the father has not taken place, a boy will choose some figure other than the father to represent his ego-ideal. He will also feel that the ego-ideal he has established is superior to the image he has created of his father.

METHOD

Because it was designed specifically to measure psychosexual development and object relationships, the Blacky Test (1) was chosen as the test instrument. This test consists of 12 cartoon drawings about a dog, Blacky, and his family, composed of Papa, Mama, and Tippy, a sibling. Spontaneous stories and responses to the standardized questions for each cartoon were obtained from each subject.

The test was scored, using Blum's scoring system (2). This yields a global score based on both the free association and the inquiry items. In addition to this global score, certain of the inquiry items were related to each hypothesis, and response to them examined individually. These specific items were chosen from the regular inquiry items because they were particularly pertinent to a hypothesis and/or because they were amenable to objective scoring and hence to statistical analysis. Thus there were two types of measurements obtained: a global one based on the free association plus all the objective responses, and a second measurement based on certain individual items. Chi Square was used as a test of significance of differences.

RESULTS

Hypothesis I. The first hypothesis, that more separated subjects would maintain a closer attachment to the mother than would nonseparated subjects, had two aspects. First, more separated subjects would evidence strong Oedipal intensity as shown by their response to Cartoon IV, which pictures Papa and Mama together while Blacky watches from behind some bushes. This aspect of the hypothesis was supported by the global score at the .02 level of significance. It was in relation to the second aspect of Hypothesis I, as tested by Cartoon XI, which shows Blacky dreaming about a dog with a ribbon on its neck, that unexpected and interesting data were obtained. It was expected that the experimental group would maintain the mother as an excessively cathected object. An examination of the responses to Cartoon XI showed that though both groups rejected the mother as love object, the control group, to a greater degree, gave responses indicating that the mother was the prototype of the love object. The experimental group, on the other hand, gave responses indicating the rejection of the mother both as love object and as prototype for the love object. For example, in question 1, Cartoon XI ("Who is the figure Blacky is dreaming about?"), instead of choosing the item response which says Blacky is dreaming of Mama, both groups said Blacky is dreaming of someone else. But in question 2 ("Whom does the figure remind Blacky of?"), the control group was evenly divided between saying that the dream figure reminds Blacky of Mama and saying that it reminds Blacky of someone else. On the other hand, the experimental group, almost 3 to 1, said that the dream figure reminds Blacky of someone else. A similar situation existed

in question 5 ("In Blacky's mind how does Mama stack up against the dream figure when he compares them?"). Two-thirds of the experimental group said she was not as good; the control group was again about evenly divided. There seemed to be represented in the experimental group something of a negative cathexis toward the mother.

Hypothesis II. In no aspect was the second hypothesis, that more non-separated subjects would show castration anxiety, supported by the data. The role of castration anxiety has been considered by some to be a weak point in Freudian theory, and the neo-Freudians, with their de-emphasis of the Oedipal conflict, concern themselves very little with castration anxiety. The lack of discrimination, by means of the present techniques, between the experimental and control groups which was shown in relation to Hypothesis II would lend some support to the view that castration anxiety was not a relevant variable in relation to the total problem of this study.

Hypothesis III. It was in terms of identification with the father that there appeared most clearly to be a difference between the experimental and control groups. Hypothesis III stated that the control group would feel a closer identification with the father than would the experimental group. Two out of three inquiry items on Cartoon VII, which shows Blacky shaking his paw at a toy dog, support this hypothesis at the .01 level of significance. To the item "Who talks like that to Blacky—Mama or Papa or Tippy?" significantly more of the separated boys said Mama or Tippy. To the item "Whom would Blacky rather pattern himself after—Mama or Papa or Tippy?" again more of the separated boys chose Mama or Tippy.

It was further hypothesized that more of the experimental, than the control, subjects would show diffusion of identification. Subjects who were ambivalent in responding to the inquiry items of Cartoon VII were considered to show diffuse identification. For example, if instead of choosing one of the item responses offered (Mama, Papa, or Tippy), a subject gave an answer referring to more than one individual (Mama and Papa, all of them), or, if he gave a response which indicated inability to make a choice (no one, no feeling, don't know), this was counted as an ambivalent response. Twenty-four of the experimental group as compared to three of the control group were ambivalent in their choice of response.

If one believes that the identification process has been affected by the father's absence, a natural question follows. What kind of identifications have these young men in the experimental group made? Though their fathers were absent, there were usually other adult males with whom the boys had close contacts. Many wives returned to their parents' home for the duration, in which case, the boy may have tended to identify with his grandfather. In many cases there were uncles or even older cousins, who could serve as a model. Sometimes the relationships available to the boy might be almost completely feminine, with no close male to whom he could relate.

One might expect the most common pattern to be one of diffuse relationship, where there were several figures available to the boy, with no one individual in a very close association. But most important of all, for the boy, none of these adult males would have, with his mother and himself, the same relationship as would his father.

Whether one accepts the Freudian concept of fixation at certain developmental levels or follows the neo-Freudian point of view in stressing the sum total of parent-child relationships, the implication of the data related to Hypothesis III is that the absence of the father during this period of the child's life has in some way affected the identification process.

Hypothesis IV. The present data lend only slight support to Hypothesis IV, that boys separated from their fathers during the Oedipal period will choose someone other than the father as their ego-ideal. Both the experimental and control groups seemed to choose someone other than the father as an ego-ideal, but a significantly greater number of the experimental group made such a choice.

CONCLUSIONS

The data presented in this study give some support to three of the four hypotheses formulated. More of the young male adults who were separated from their fathers during the Oedipal period showed strong Oedipal intensity than did those in a similar group who were not separated. Fewer of the separated group felt a closer identification with the father than the nonseparated group. There was some evidence that the separated group tended to a greater degree to choose someone other than the father as their ego-ideal. Castration anxiety was not a relevant variable in distinguishing the two groups.

That the absence of the father during the so-called Oedipal period has affected some aspects of personality development seems clear. Interpretation of these changes, however, is not so apparent. There appears to be the clearest difference between the two groups in terms of the boy's relationship with his father. But this difference need not be attributed solely to the absence of the father during a particular psychosexual period of development. Studies (7) have shown that the period of adjustment after the father's return is a difficult one. In this study, environmental factors after the father's return were not controlled as variables. It is possible that self-perpetuating patterns of relationship were established because of this difficult adjustment period, patterns which would not necessarily have appeared had the father been present continually. The question remains: What would have been the personality development in the experimental group if the father had returned to a warm, understanding relationship, without either father or child experiencing a difficult adjustment?

Future research controlling environmental differences after the father's return would limit experimental variables to the period of the father's

absence. This would perhaps throw more light on the problem of finality of experience during certain psychosexual developmental periods.

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THE SEARCH FOR CHALLENGE¹

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I want to discuss the problem of discovering challenge in what Galbraith calls the "affluent society," challenge when the older challenges based on the subsistent society and the struggle for sheer survival are no longer imperative. One of the perspectives I want to use is cross-cultural, and we shall look at an anthropological example. Another is historical, and we shall look at ourselves as we were in an earlier day—this, too, is cross-cultural. The third perspective is genetic, in which I shall ask what sorts of challenges are requisite at what stages of one's own life cycle. This is a vast topic. I don't bring to it the erudition of a Toynbee or an Alfred Kroeber, but on the contrary I shall bring to it some observations and free associations in the hope of stimulating further thinking.

Periodically throughout Western history, men have imagined that collective as well as individual life could be better, or at least less bad. In times of chaos and of war they dreamed of social stability and hierarchy, as Plato did in *The Republic*, or as Sir Thomas More did in his *Utopia*. Myths of heaven refracted the popular weariness of toil, short life, illness, and social disorganization. Periodically, too, men could be mobilized for revolt against plainly oppressive conditions, once these conditions had lightened enough to make them seem less than divinely given. For the ills that have plagued man have been such nightmares that men at all but the lowest levels of brutishness could grasp the possibility of being less badly off, once they

¹ This lecture is taken with little alteration from a tape-recording. In an earlier version, it was presented at The University of Chicago as one of a series on "The American Future"; the version presented here was given as an inaugural lecture at Kenyon College in October 1958 (and appeared the following spring in the *Kenyon Alumni Bulletin*); and some of the ideas were also presented in a discussion at Monteith College last fall. In each case, extensive discussion followed the address and gave the speaker the chance to qualify a number of issues too flatly and simply presented here. Some of the objections are reflected in footnotes to the recorded text, but I have left the latter virtually unchanged, not because I feel it is the best I can do on the many exigent themes that are raised but not resolved, but rather because in two crowded years I have not had time to attempt revision, and because I believe that the issues of Utopian thinking are so urgent that even my errors and oversimplifications may widen discussion beyond the audiences which provided the original impetus and criticism.

I am indebted to the Carnegie Corporation for a grant that has facilitated work on matters discussed in this lecture; the lecture also reflects the concerns of the Center for the Study of Leisure, established in 1955 under a grant from the Behavioral Sciences Division of the Ford Foundation.

were less badly off. Today, however, we are faced with a paradox: the United States and a few other rich countries have caught up with many Utopian ideals while at the same time literal belief in heaven has almost vanished. In this country people suffer less from nightmarish misery than from the more subtle disorders previously buried by the harsh struggle for existence.

We can see an analogue to this development in the short career of psychoanalytic therapy, which is about sixty years old. When Freud began, patients came to him who were suffering from hysteria, from paralyzed arms, from inability to talk, from obvious symptoms. By helping them internalize what they had externalized, that is, what they had (so to speak) thrown into an arm, it was relatively easy, even speedy, to cure them. Today, in contrast, one sees such cases only, for instance in this country, among immigrant Poles in Pittsburgh or among rural southerners in West Virginia. Many therapists go through their entire lives without ever seeing such a case. People come to analysis today who do not suffer from an external subsistence problem, from a paralysis. Their limbs work and their sexual organs work, but somehow life doesn't live up to its billing for them; they carry on an unrepressed interior dialogue, but it bores them. Often, I might add, all they do is include the analyst in the dialogue and bore him. They need, usually without knowing it, a new vision and not merely a new way of talking about themselves; in fact, I was talking the other day with an analyst who said that patients talked today, as was no surprise, very freely indeed about any of the things that in Freud's day would have been considered private and intimate.²

Yet, as we all know, most of the rest of the world would trade places any day with the rich American and trade its miseries for his neuroses. An ironic instance are the Manus whom Margaret Mead revisited several years ago, twenty-five years after her first field trip in 1928. When she had first been there, the Manus had been a Stone Age people; then had come World War II and their island had been a staging area for American troops. When she arrived, the Manus had just finished throwing out a Catholic mission because the mission was trying to get them to adjust slowly to the ways of

² A number of people in the discussion and in correspondence have taken exception to this position and to the similar outlook of Allen Wheelis in *The Quest for Identity*. They insist that their own therapeutic experience shows that the old-fashioned neuroses are far from vanishing; that sexual problems are still exigent, and nearly ubiquitous; that merely the forms of repression and defense have changed. To these criticisms, I have been inclined to reply that all "geologic" strata exist simultaneously in the United States; that different therapists have different clienteles, and evoke different aspects of the same clientele; that all problems, sexual and existential, are of course interrelated, but that there are some people for whom the problem of meaning is more significant even than the problem of sex; and that the question of distribution of these several strata and symptomatology remains an empirical and open one.

the West, whereas they wanted to take over the distance to modernity in one big jump. They thought the white people in the mission were patronizing them, holding out on them, trying to ration the blessings of industrial society. You can imagine the position of the mission which was saying in effect, "It isn't just so wonderful to be Westernized, and take it easy." For the Manus the effort to act like Americans was a heroic challenge; one, in fact, which produced a revolutionary leader, Paliau, a man of enormous strength and determination. For him, it was a new religion to become Americanized.

The Manus, like many South Pacific peoples, had had their craze of cargo cults in which traditional objects had been thrown in the ocean in the fond belief that planes or boats would come, piled high with the white man's goods, if only the Manus would propitiate the cargo by appropriate action. Even where the cargo cult does not take such open and violent form, it exists. A few years ago I met a Burmese doctor who had come to The University of Chicago to study technological change. I asked him why he, a gentle and speculative man, had left his homeland on such a quest, and he replied that once the peasants in the rice fields had seen American movies and Cadillacs they would never be quiet again until they had them too. Daniel Lerner, in his book *The Passing of Traditional Society*, discusses interviews which were done a few years ago in seven countries of the Middle East. In these the theme that life in America is more modern and, hence, better comes up again and again; whatever the political hostilities towards America, one finds this lure among Egyptians and Syrians and others who are politically and ideologically, violently antagonistic to America, yet admire it. The dream of America—the dream of plenty—is shared by people at all levels, and it is also rejected on religious and traditional grounds by many who are obviously and plainly influenced by it. The conflicts are only about the rate of speed with which one should move to plenty and the mode, and the Malthusian handicaps and how they are to be overcome, and the values to be reintegrated by doing so. And all this is new and exciting to peoples to whom it happens, but it is not new to the West—we have had it.

In fact, we can today in some considerable degree measure the backwardness of a social class or a nation by the extent to which America provides it with a model of Utopia. For the intellectuals of Europe and of India, for instance, America is more to be feared than admired, distrusted than copied. The collapse of the image of America as a vision of Jeffersonian equality and of orderly democracy has been enormously rapid and is not merely the result of Communist propaganda. One factor is the shutting off of immigration after the first World War, which doused the hopes of millions of south Europeans and Levantines that they might find a personal Utopia in the United States; and in these interviews of Professor Lerner one finds

this also coming up again and again—people from Syria or Turkey who have uncles in America and who would like to come here and can't.

The more vociferous Americans themselves, moreover, in desperate search of a self-justifying ideology, have been tempted to identify *the* American way with their own tendentious misinterpretations of our economy as one of free enterprise or to boast of American technological virtuosity or of the workingman's standard of living. This last might appear to appeal to workingmen in some places, but it does not appeal to the elites whose own frustrated materialism is all too well acted out on their behalf by strident Americans.

I have in the last years talked to a good many non-Americans who, like the Burmese doctor, are visiting this country in the hope of hastening the economic development of their own land, and they have gone home again with an ambivalent feeling: can they reduce poverty, cut the birth rate, start cumulative economic growth, all without arriving at the American destiny—that is, arriving at the place we are now, from which the next steps are opaque—once the novelty wears off?

I would be giving the wrong impression if I were understood to contend that there is no Utopianism in present-day America. There are first of all many conservative people, who find in the American past an adequate image for the future: they contend that if only we balanced our budgets, spanked our kids, worked hard and uncomplainingly, tore down all the teachers colleges—all would be well. And there are many others who find in the huge distance we still have to travel towards economic, and especially towards racial, equality enough challenge for their lifetimes—and in a sense it is enough. Likewise, the effort of the Communist bloc to overtake America has given still other Americans of both major parties the short-run aims of a coach whose all too confident team has lost a game—the feeling that with a little discipline and locker-room talk, along with better scouting and recruiting for scientists, all will be recouped. Perhaps the major benefit thus provided for Americans is the renewed conviction that there is a game and that winning it can give meaning to life. In my opinion none of these, not even the generous one of getting rid of the residues of inequality, is sufficient to mobilize social energies to take the next obscure steps in American life that would bring us a measure of international security and more adequate social goals for an age of plenty.

In this situation many of the most sensitive and truly disinterested young people have given up the larger societal goals to pursue what I might call the Utopianism of private life. It is in the family first of all, and beyond that in the circle of friends and neighbors, that one looks for Jeffersonian simplicity, an idyll of decency, generosity, and sensibility. Much of the confusion in current discussion is due to failure to distinguish between the high quality of these personal goals of young people and the low quality of our

social aims. That is, if one is looking at the texture of individual life in America, this country is harboring, despite all surrounding miasmas, extraordinarily fine enclaves whose tone, though not ascetic, has something in common with the outlook of Utopian colonies in the last century, or with Hopi pueblos, or with the spirit of some of our great nineteenth-century dissidents, whether Melville or Whitman, William James or Bellamy. In many past epochs of cultural greatness the dichotomy between an *avant-garde* few and the brutalized many was taken for granted and would occasionally perpetuate itself for long periods. But in the United States today the contrast between the private Utopianism that I have spoken of and the general low level of vision in the general population and its political activities seems to my mind both less tolerable and less viable for the long term. With the growth of interdependence within and between nations, private virtues, if they do not actually become public vices, become almost irrelevant—beautiful gardens at the mercy of fall-out. I don't expect every young person to take part in the development of a more inclusive Utopia than "familism," but I would like to see a better proportion achieved between private and public visions; indeed, I believe that private life would be enriched and in a way become more meaningful if the two spheres were both more forcefully cultivated.³

When I spent a summer in the Soviet Union twenty-seven years ago, I met many eager young Communists who had enthusiastically junked all private aims in the communal enterprise of "building socialism." Amid a Philistine culture made desolate with slogans, they *were* building socialism in an all too literal sense, i.e., they were building dams, railroads, factories, and machine tractor stations and Communist Party apparatus. They brought to their work the zeal of pioneers and, as a blueprint for their own activities, the model of American industrial achievement. At the Stalingrad tractor plant, then barely beginning to produce, I saw fanatical young Stakhanovites (and I guess the term "Stakhanovite" is unknown to many undergraduates today; that is a kind of Russian version of an Eagle Scout) working with tremendous zeal in the midst of a mass of sullen peasants, new to industry and by no means reconciled to its restrictions. I had gone over with a group of American students, some of whom found

³ A number of students took these comments to mean that I was opposed to painters, writers, composers, and other artists—or was asking of them a dedication to "agitprop" activities. Of course not. People don't have unlimited energies and have to make choices reflecting their own idiosyncratic temperaments and gifts. I don't want to see a good artist become a poor politician—or vice versa (any more than I want to see a good engineer become a bad physicist because "pure science" has greater prestige). However, I believe that many artistically inclined people shun political discussion when it could actually enliven them, and shun it out of misunderstanding, fashion, and fear. Moreover, I think there are occasions when the sense of solidarity should help us overcome our more characteristic isolation on issues—such as the current arms race—when all life and hence all art is threatened.

this spectacle in contrast to the America of the depression marvelously exhilarating. It was a battle with simple rules and clear goals, or so it seemed, and, in fact, the reports from Stalingrad in *Pravda* and *Izvestia* were couched in the language of battle—so many tractors had been turned out that week on the Stalingrad front, or there were so many defeats in the battle for electrification, and so on. I thought then, and I still think now, that the tasks confronting Americans are more exhilarating but also more problematical. It would be child's play for us to build the Turk-Sib Railway or the Dneprostroi dam, although, as I shall indicate later, every child should have this opportunity. We have to make our own model of the future as we go, in a situation which is new historically.

It is at this point that the Communists have done us an immense and possibly fatal disservice by so largely discrediting secular Utopias at the very time when religion no longer offers an illuminating other-worldly Utopia but has also become an adjunct to private life. While it is helpful for people to realize that fanaticism in pursuit of Utopian goals is a danger, allowing people to express their worst impulses while defeating their best hopes, the reaction among contemporary non-Communist intellectuals has gone much too far. Today the most influential Utopian writings are satiric anti-Utopias such as *Brave New World* or *1984*, which extrapolate, in the former case largely from the United States and in the latter largely from the Soviet Union, to their visions of a more total despair.⁴

The Poles and for a time the Hungarians who rose against the terror could express in the writings of students and intellectuals a kind of minimum-decency platform—humane and sensible, but Utopian only in contrast to Stalinism. They have been like hysterics recovering from paralysis in the early days of psychoanalysis; and as the hysterics, once cured, could continue to operate on the moral capital of Victorianism, so these Polish and Hungarian revisionists can draw on the moral capital of pre-war Social Democracy; hence can project into the future their recall of the slightly less gruesome past, just as heaven is often the retroactive image of a childhood Eden.

As I have said, however, we Americans have caught up with our future at the very historical moment when the Communist example has done much to dampen Utopian thinking; such thinking, I need hardly say, is never easy. All literature shows that writers can more readily picture terrors than delights. For one thing, as Margaret Mead has pointed

⁴ A number of critics have objected to the very term "Utopia"; as one colleague succinctly put it, "The only Utopia I am willing to think about at this moment is the society which develops people who will not need Utopias." There is a lot of semantic confusion between "Utopia" and "ideology"; I use the former term (in Karl Mannheim's sense) to mean a viable and conceivable society, not an intellectual swindle for True Believers. I think one needs goals based on the truth about man's nature and about society and that these goals have to be more than piecemeal and *ad hoc*, but I won't quarrel with people who would prefer to call this a vision rather than a Utopia.

out, we can all empathize with terrors, whereas delights, if they go beyond platitude, differentiate us. (Contrary to Tolstoy's epigram, all happy families are not alike.) I have been struck all my life with how difficult it is for people—even storytellers and artists—to imagine nonexistent things: to imagine, for instance, nonexistent animals, they can only put parts together which are already available and come up with a centaur or a unicorn, much as science fiction for the most part is more science than fiction. Now that we can draw on the world storehouse of cultures through our knowledge of anthropology and history, we can in imagination make unicorns, i.e., fit pieces of culture together, but we find it hard to invent new ones.

And yet on the whole, social science, while enabling us to draw on a far wider spectrum of human experience than any one culture has ever had available to it, may have contributed to the decline of Utopian thinking. To free themselves from moralism and the kind of shallow evolutionism one can find in Herbert Spencer, social scientists in our time largely have eschewed either looking at evolution or engaging in prophecy. Somebody asked me recently whether sociologists weren't "do-gooders" and I said I was afraid that that was a thing of the past. The most frequent device for saving thought and conscience here is to say that the social scientist when he makes proposals for change, rather than presenting limited alternatives to a powerful decision-maker, is simply a citizen. As a scientist that is not his business. And science increasingly has become his business, and a business carried on in a businesslike way, making measurements and keeping up with what is euphemistically called "the literature." Utopianism reappears in disguised forms, to be sure, as for instance in the belief that if vaster sums were spent on the sciences, prediction and control could take the place of prophecy; there is also the narrower Utopian hope that if each subdivision of science pursues its private aims, some later ecumenical movement may reunite the scattered findings within a grand scheme. (The very largeness of the branches of social science in so vast a country as this means that men can live their whole intellectual lives within the boundaries of a single subdiscipline.) Moreover, as more and more people go to college and more and more people teach those who go to college, intellectuals are increasingly becoming attached to universities; this is an ambivalent trend in the light of the experience of the past that many of the most seminal ideas have come from outside the academy. And social science, like other intellectual activities, has been steadily democratized, in the sense that its concepts and findings are regarded as valid only if they can be taught to any competent graduate student. Thus, analysis of social wholes, entire cultures, which remains something of an art, is not a game at which any number can play, and it tends to be deprecated and hence postponed until that quite distant and hardly foreseeable day when it can be handled in terms available to anybody. Thinking, that is, about a whole society is not something that can readily be democratized. And as for Utopian think-

ing, most of us after childhood form categorical images of our society and, while aided by images of hell we can imagine things being worse, we cannot imagine them being significantly better.

In addition, although the first explorations into social science often made men hopeful, as they made Condorcet or Marx hopeful (although not Malthus), later immersion tends to make people less hopeful, for it destroys the illusion that the masses have noble dreams which the capitalists or the bureaucrats repress. It shows how immense and how far-reaching are the changes in men's hopes and desires that would be necessary for the creation of a better world: we do not stand outside the portals of heaven only because some vested interests bar the way. And market research is frequently interpreted in such a way as to confirm the *status quo*; it makes, when conducted by politicians, things that might be worth doing "politically impossible." Let me take a trivial illustration: we go to people for instance and ask them if they would like a small car, and they say "no," or they say "yes" in such a way as to mean "no." Then we proceed to make many big cars, thus changing the visual landscape and people's expectations of what a car looks like and thus prove that people don't like small cars. Even so, a change in circumstances, let us say a slight recession, can show how evanescent was the earlier preference, especially among educated people who, having gone to college, have opinions and tastes which fluctuate more rapidly than do those of people of lesser learning. And, of course, market and public opinion research often can serve, if well done, to show that people no longer believe what they are supposed to believe and this can be emancipating.⁵

Nevertheless, it seems to me that over-all the tendency of the effect on us of increasing knowledge of man is to curb radical departures of thought in the social sphere, less I think because of McCarthyite opposition than because we ourselves want to feel we are sensible, calm, well-organized people. The great achievement of the physical sciences, in my judgment, is not their ability to codify and measure—this is a detail, though important—but their ability to go beyond common or even uncommon sense to hold

⁵ A good many students in discussion took the position that social science, at least under present conditions, could never be emancipating, but only manipulative. The dangers of manipulation are real enough, particularly if one is thinking of the long-run climate of opinion and of the indirect effects of living in that climate; but I feel that there is a great tendency to exaggerate the power of "the hidden persuaders" to influence people in making short-run choices. This fear of the power of the Madison Avenue ad-man to put really important things over on us (and not merely relatively inconsequential choices among consumer goods, or among nearly identical political personalities) seems to me a high-brow version of demagogically inspired fears that the bankers or the Jews or some other small conspiratorial group pull the strings behind all events. In any case, defeatism about the potentialities of social science for nonmanipulative ends tends to be self-confirming and to leave this as yet quite awkward tool to work only on behalf of the *status quo*.

ideas—like the concept of the wavicle—which are paradoxical or contradictory and which bear no relation to daily sense experience. (It would be better, on second thought, to speak not of daily sense experience but rather of our cultural and linguistic codification of reality: those categorical imperatives which result from our specific and historical way of seeing as well as from perspectives framed by the human condition as such.)

Young children are somewhat less firm in their control of and by the given ways of seeing reality, and I want now to turn from the general and cross-cultural problem I have been discussing, of how one finds or how one fails to find a new vision, to the genetic one, that is, to see what forms of challenge can be expected in the different ages of man from childhood to maturity. Observers of children's play, such as Piaget and Erik Erikson, have commented on children's desire for mastery, the integrative quality of much play. The studies of these men lend some support to the belief that children at certain stages of development can be freer in their aesthetic sensibility and their formation of concepts than in earlier more literal, and later more conventional stages. Other students of childhood (notably Ernest Schachtel in his paper, "On Memory and Childhood Amnesia") have noted the ability of great artists, such as Proust or Paul Klee, to recapture the codifications of childhood without going crazy: ability, that is, to retranslate the freedom and imagination of childhood into adult terms. Percival Goodman, an architect, and Paul Goodman, a novelist, have shown that kind of freedom and imagination in their neglected and out-of-print book *Communitas*, where they employ the traditions of Utopian thinking and the customs of other cultures to create several kinds of social and architectural designs for the future of America. In fact, they employ the model of children's play in much of their discussion. But I don't know any case where a researcher has systematically asked children before their teens to depict the sort of world they would like to live in, that they would find exhilarating, or invented a game which would call on their conceivable abilities for making cultural kaleidoscopes. (We have, of course, games which children play which simulate the adult world as it is, such as Monopoly; and *Mad* magazine recently suggested that children might also play other adult games, for instance, "alimony"—player who reaches Reno first wins—"draft dodger," and "make-out"—in which boy chases girl. Here once more the macabre is easier to evoke than the Utopian.)

Moving on now from children and adults, I want to mention one example of approaching Utopia through the techniques of social science—an example that, I fear, shows how little these techniques can contribute at present. I have in mind a recent study done at The University of Michigan for the Michigan Bell Telephone Company in which a group of articulate adults were invited to let their imaginations roam free and to tell trained interviewers what sort of things they would like to see in

the "world of tomorrow." Out of 126 interviews, mainly with well-educated respondents, there were, in fact, few suggestions which were at all visionary. Respondents want a machine which will bring them the morning newspaper from the doorstep. They want conveyor-belt highways and drive-in supermarkets and automatic car controls. They want a personal air-conditioning unit inside their clothes. (This reminded me of Aldous Huxley's novel *Antic Hay*.) Or they want a machine which will bring them any sight, sound, smell, or climate they choose without having to go out to find it. They want to be able to bring back fond memories at will and to erase annoyances at will. One wants a device to look a doctor over without going to his office, another a device to make it easy to complain to a supercilious salesperson, or another a gadget to allow one safely and anonymously to bawl out somebody. One wistfully asks, and here is one of the few quasi-political suggestions, for some means of making suggestions to the legislative government (that's his term), and still another says, "I want to be able to visit relatives and friends without missing church." One wants "more variety in my daily living—a surprise every day."

If such wishes can be called Utopian at all, they are once more very private; they are seldom connected with any plan for the development of the individual's powers, let alone any plan for society more extensive than that of the person who wanted whole cities covered with plastic to keep out the weather. Many of the suggestions represent what I have sometimes called the cult of effortlessness. I speak of it as a cult, for I don't believe that most Americans not presently overworked seek this nirvana with steady passion. But it is striking that in the interviews, and perhaps reflecting their relaxed form, no one seems to wish for obstacles, for challenges, for things that take time and require effort.⁶

Children assuredly are seldom like that unless they are sick: they are often a problem for parents and other adults, and for people who have to enforce parietal rules too, because they have energy to burn. To some extent, children fall back on the nearly universal culture of games, for which they need only modest equipment and a modest tradition which they fondly elaborate. At the December 1957 American anthropological meetings I saw films from New Guinea showing children at play—they kicked balls, climbed trees, imitated adult ceremonies, including a complete funeral with a dead chicken as corpse. They also slid down mountains on homemade sleds, not on snow (this was in the tropics) but on sand or

⁶ Much could be said about these interviews and how their lack of dialectical bite may have contributed to the banality of the responses. It would, of course, take a great deal of ingenuity and imagination to discover how one might stimulate the almost atrophied power of ordinarily unreflective people to think about a better society—in other words, to make the situation real for them so as to stimulate their fantasy. The Goodmans' book, *Communitas*, by presenting models and the drawings to accompany them, does move in this direction. Criticism of the Bell Telephone interviews was often voiced in the discussions.

grass. And as I watched them I recalled my experience when I lived a few years ago in Kansas City. My home was near a park where gangs of young people from well-to-do homes would gather in their parents' cars at night in search of, as it seemed to me, nonexistent mountains. With much screeching of voices and brakes, they would tear around in their parents' Buicks and Oldsmobiles at 80 miles an hour. I don't know how many of you recall the movie *Rebel without a Cause*, in which comfortable California teenagers sought even more desperate challenge than merely driving too fast, as if they had to initiate each other in the absence of more formal initiation rites. What is left in such children of the Utopian impulse is soured and is only negative; all that is open for them is the road ahead. Such young people hang suspended between the traditional games of children and those which war and work and some new and some old kinds of play provide for adults.

It is hard to imagine a culture like ours suddenly turning every adolescent into an artist who finds challenge in creative exploration, although some hot-rodders seem to me to be sculptors in metal and inventors as well, whose "cars of tomorrow" have sometimes been imitated by Detroit. Considering the emphasis currently put on sports, it is surprising how small is the proportion of high school students who actively engage in them; there are, I would surmise, as many drop-outs from the athletic program as from the academic one. The community and the coaches alike interest themselves for the most part in the valuable players of team sports and only a few high schools have adequate teaching and equipment outside the squads for the major sports. The Y and the Boy Scouts do ancillary and often important work, but often the slow and awkward boys have little encouragement, and the girls none at all. At the wheel of a car however, as we all know, many boys and many people who are perennially boys seek to make up for deficiencies in other sports as well as for lack of challenge in other areas of life.

No doubt extremely inventive children could find other alternatives, but when I was in Kansas City I kept thinking that it made a difference that there were no nearby mountains where these young people could go skiing or climbing and fulfill in that way the desire of young people to test and extend themselves, the recurrent romanticism and individualistic Utopianism of the young. I am quite sure that if mountains were plunked down near Kansas City, many of these high school youngsters would go there to ski and climb. Of course they would not have invented the idea, but the mountain would still create its own demands on them once the idea existed. We all know young people who look as if under ordinary conditions they couldn't walk a step if they could drive for a block, yet go to Aspen or Wisconsin or Vermont on weekends and spend a day or two in often bitter cold weather schussing down mountains. It seems to me that as a social policy for full employment the country might build other things than

armaments and super-highways and might move mountains to Kansas City for the youth of that city and other such cities to tackle.

Moreover, I believe that building the mountains, and the ski trails and firebreaks to go with them, would provide another challenge for these young people. Many parents today try to discipline and harden their children with chores or paper routes, but in our society the young, always sensitive in such matters, are quick to realize that the work they are asked to do is after all not really necessary but could be done with machines. The experience the psychoanalyst Allen Wheelis describes so movingly in his book, *The Quest for Identity*, of being forced by his father in the South to cut the grass with a razor blade all one summer as an exercise for the will—such an occurrence seems impossible today. Yet the testing that parents and adults no longer provide, the children seek; can it now be provided institutionally? That is, can we think of any organized way of locating snowy mountains needing to be cleared as well as skied down, any way of connecting the young person with others in the way that the age grades of a primitive tribe connect him and get him to go through initiation rites together with other young people? Such a rite tells the young person, "Now you're a man, no question about it"; and may require in addition that the young person bring back, not an impersonal pay check or a piece of consumer goods equipment, but a personal totem and even a personal vision or a command for the whole tribe. Compulsory military service seems to me a remote analogy for some young people in wartime, and even during peace. But save for a brief spell of basic training, compulsory military service seems to me to be training in nonwork and more or less impatient time-killing. Although some privileged young men do enter the army with the thought of experiencing a common democratic fate, the military situation today is so fantastical that most recruits don't enter service with any zeal or any spirit save resignation, or at best the hope for some relevant training. Moreover, the avoiding of service raises moral dilemmas just as service itself does. For the privileged who are studying physics or clinical psychology or something else of presumptive usefulness, there must always be the question whether their motives for choosing this career are contaminated by draft dodging, just as they may feel they married the girl for the same reason. Is there any meaningful as well as moral equivalent for basic training which could be applicable to all and to women as well as to men?

One partial answer has received insufficient attention, partly because it was blotted out by World War II and the ensuing full employment, and partly because we are careless of small social experiments although not of small scientific ones: I am referring to a variation of the CCC camps. (I wonder how many in this audience know what they were? "CCC" stands for "Civilian Conservation Corps," and if you do not know this, it is a sign of the enormous gap that separates post-war from pre-war America.)

The CCC was one of the many improvised relief measures, like the WPA, but its aim was conservation of lands and forest—and, as a by-product, people. Young men out of work and in need could enlist and go to camp in the country where they would clear trails, install soil conservation ponds, build firebreaks, and so on.⁷

Many privileged young people have a desire for this kind of experience, as manifested in Quaker work camps, at Antioch, and in other ways. And there was founded in Vermont during the depression a variation, for such boys, of the CCC camp, called Camp William James. Its founders were Dorothy Thompson, Eugen Rosenstock-Huussy, a Dartmouth professor, and a few other people who felt that the CCC experience should not be limited to the desperately poor. It attracted Dartmouth students and Bennington girls and others whose needs were psychological rather than alimentary. Camp William James was an appropriate name, for James was passionately concerned with the moral tone of the elite who were his students at Harvard and eager to find in the moral life forms of discipline other than the juvenile hunting of men and beasts he despised in Theodore Roosevelt and would have distrusted in Hemingway. I never had the good fortune to attend Camp William James, but I have known a number of people whose lives have been deeply affected by their experience there. Some of these people today look back on that experience as a naive and nostalgic venture, a ruralistic oasis for a Mary McCarthy to satirize; they recount how ridiculous they were as amateur trail clearers or well-intentioned emissaries to unenlightened Vermont villagers. Indeed the fear to be thought naive today, or a do-gooder, has been in many ways as corrupting

⁷ As it turned out, there were a few people in my audience who had been in the CCC; and some of these attacked my notion on the ground that the commanders of the CCC had often been anything but educationally minded, but instead non-com types who could only regret that no actual war was going on, and who ran their units with as much militaristic highhandedness as they dared. Unquestionably, the leadership of such a project would make all the difference; there is no activity that cannot become stultifying or an excuse for sadism or moral inertia. As I sought to make plain in the discussion, I suggested CCC camps, not as an unequivocally noble experiment, but rather as an illustration of a kind of thinking about the conservation of people and places. (Since presenting my paper, I have discovered that Senator Hubert H. Humphrey has proposed a reconstitution of the CCC; see his excellent article, "A Plan to Save Trees, Land, and Boys," *Harper's Magazine*, January 1959, pp. 53-57.) And of course my discussion of mountains was intended to be similarly metaphorical and suggestive: I am sure one could think of a better solution for Kansas City's young people than building a mountain in nearby Lawrence—the real problem is to find work that taxes and discovers their powers. Indeed, I insisted in the discussion following the lecture that our whole industry should be geared, not so much to turning out products that we scarcely need, as to making factories themselves places of creativity for everyone; I mentioned the imaginative pioneering along this line of Dr. E. H. Land of Polaroid.

as fears in an earlier day to be thought evil-minded or agnostic—correspondingly, I know it is far harder to interest college students in a work program than it is to interest high school students, and it is harder to interest high school students than eighth graders. But my point here is not to denounce the skepticism of the young today, which has many positive aspects, but rather to indicate how hard it makes their task of finding challenge in the work of conservation and, in general, in fighting for and against nature.

One enormous advantage of a period of some sort of compulsory service, foreseen by Bellamy, beyond the advantage to the young people of having their energies made use of rather than dissipated, lies in the possibility of justifying through this service future periods of voluntary paid unemployment. Most of us, once out of college, never have another chance for a moratorium during which we can reflect on our course and perhaps reshape it, getting such additional training as may be requisite. (And incidentally, as colleges get better and harder to get into, they become less of a moratorium, too, and courses interfere with one's education.) I'm thinking not only of the millions of young people who are trapped in their careers, and of the older people, too, who cannot afford the risks of change, including many housewives with children, who are captives of their own families. I am thinking also of the many people who would welcome a change from their particular specialty (a change which I have myself enjoyed). The only way in which, for instance, many academic people, many doctors, many engineers can change jobs at present is to become administrators. They are seldom able to switch to an entirely different specialty which requires extensive preparation. But if such people had in their youth contributed to a kind of social insurance fund, they would then be both morally and financially free to live for an equivalent period on the labor of others and have this period in which to retrain themselves for some other activity. Possibly if they would loaf for a time they might purge themselves of the dream of effortlessness; at any rate, they could try another form of life without undue hazard for themselves or their families.

Perhaps you will see what I am getting at here—namely, that each particular stage of life requires its own particular forms of tradition and change, challenge and surcease. In the dialectic between specialization and wholeness, people should be encouraged not so much to change jobs, which Americans do all the time, as to change the very forms of work. In the last great war, that is, in World War II, an extraordinary number of Americans discovered gifts that they had for all sorts of activities they would never have dreamed of or only have dreamed of. And many returned dissatisfied with old occupations and prepared to risk entering new ones. Here the G.I. Bill is a model that I am looking for—it justified retraining at public expense for millions of men who had been introduced during the war to new experiences and opportunities which they would never have thought

they were capable of. What I am seeking, in other words, is the basis for a G.I. Bill for everyone—women as well as men—not as a handout but as a right earned through arduous service as youngsters.

Let me refer in this connection to those management training programs in which men are taken out of middle management positions and sent for a period to a university, not to study techniques or a specialty, but to obtain a liberal education. I visited some years ago the most exemplary of such programs, that of the Bell Telephone Company at The University of Pennsylvania, where a number of men, some twenty in all, were there for a year in one of the most uncompromisingly humanistic programs one could find in any liberal arts college. Many of the men there had not been to college, or worse, had been to engineering school, that is, a narrow-minded engineering school. They were suddenly faced with a program equivalent to two or three years of the most *avant-garde* intellectual fare—plunged into reading Joyce, hearing Bartok and Hindemith, studying cultural anthropology, and reading Lewis Mumford. It amazed them, as well as their teachers, that they could in the majority of cases rise to the challenge, rise to the point of discovering capacities in themselves they had no idea of. Like college students, or like some college students, they would stay up most of the night reading and discussing an assigned book and plaguing themselves with its obscurities. No group I have ever talked to was more alive and responsive than these men.

If we examine these instances, we see some of the problems of creating challenge when the natural environment no longer forces us to struggle. In the first place, there is a group, there is support for the work and for the temporary miseries and agonies found in the work. It asks too much of people today, I think, to expect them to find these challenges alone. In the second place, there is an assignment—a norm is set by the group. The norm is set outside oneself, so that one is not running alone around an unmeasured track to an unknown destination. In the third place, there are models provided in the books themselves and in the mentors who are lecturing or coming to the group from the outside. All these things are concessions to human frailty. Most of us have to make a game of work, to set deadlines for ourselves, to put ourselves into situations, as a skier does, from which it will take exertion and skill to get through and extricate ourselves. Indeed many of the important choices in life are those we make to create conditions in which we develop under something like forced draft, and for many of you I imagine that the choice of college was such a choice. In fact, college provides at its best the closest thing we have to an initiation, one in which the cultural heritage is not so much stamped onto the bodies of the young, as transmitted to their minds and senses. Of course it happens in high school, too; there is no definite date for the initiation when we begin to accept responsibility for making the culture a part of ourselves. Some of us, of course, accept more of the culture than others. This, unlike my notion

of Camp William James, is a more selective service which is at once obligatory and an opportunity.

In this connection I would like to mention a notion which I once discussed with a group at Antioch—that students during some part of their college life be locked up in the library alone with books, and adequate food and drink, for a week at a time. Though I think some might go “stir” crazy in the absence of audio-visual aids and chatter and study dates, still I would like to see the experiment tried. For I regard the arts as capable of providing many of us with tasks more than sufficient to challenge us, even were our industry and farming and commerce to become more nearly automatic. In the library, and in the whole experience of becoming part of the process of cultural transmission, one discovers one’s own mountain, one’s magic mountain, which one creates as one climbs it. In this perspective we can view a curriculum, whether of the traditional studies or of the less usual ones, as a series of ranges set down in Chicago, Kansas City, Columbus or anywhere else by the work and imagination of earlier generations as well as the present one.

If books were the only such vehicle, many young people would, of course, be entirely excluded—either because of lack of native talent for literacy or, more usually, because the reading of books somehow got involved with struggles against parents or other adult figures. The same is true of the language of numbers—not because there is anything inherently difficult about it, but because learning arithmetic or algebra has somehow gotten involved with wishes to be taken care of by others or to make life hard for others or for oneself in all sorts of complex ways, or for girls to define their femininity by letting men read the timetable for them. The learning of music also may have its blockages, but it is usually outside the formal curriculum and often thus provides a second challenge for some young people, one increasingly made use of in our own day with the immense growth of group singing and playing. As with the authors of books, so with the composers of musical scores, though they may have been dead two or three hundred years, their spirit is kept alive, their imagination, their sense for form, by being bred into the fingers and bones and voices of the young amateur. Of course, as I have already implied, there are children who are forced, let us say, to practice piano and they respond by learning-blocks. But there is a difference between those subjects one has to learn and the arts one generally learns out of inclination. Thus while any subject, any discipline, can become an arena for struggle between adults and children, the arts are relatively free, as compared with the academic program, of the kind of misplaced parental vanity which wants the child to do well.

I realize fully that the better and more exciting graduate and professional training becomes, the greater the demands put on later life to live up to expectations. A first-rate college often seeks to make us dissatisfied with

what we do later. What I am driving at here, is that, provided each stage of life offers challenge and as we therefore grow to meet the challenge, we demand challenge in the next stage. I've heard good prep schools criticized because colleges aren't as good as the best prep schools, and now I am saying that colleges are sometimes criticized as breeding discontented intellectuals who are too good for this world, whether "this world" is the graduate school to which they go on or a career in business or the professions. But I would be much happier if more colleges put more of this kind of pressure on later life to live up to college; that is, if more people got out of college who insisted that the world live up to the expectations created by college. I think one reason such insistence is muted is that people, once in a job and in a marriage, have no financial leeway to make a radical break and therefore the criticisms they might otherwise make simply don't occur to them; and this again goes back to my thought that if one had a period of compulsory service doing such work as building mountains, one could then later in life have a claim on society on the basis of that service. Now, actually, our society is rich enough so that we don't need that basis, we don't need it, that is, economically although we do need it psychologically or politically. Today, if people find their job undemanding, their temptation is not to seek for a demanding job or to struggle politically for a world in which jobs are more demanding and more interesting and in which industry and the professions do less in the way of stockpiling talent than they now do. Rather I think people flee into what I have called the Utopianism of private life, of domesticity. The trouble with this is that it puts too much of a burden on domesticity, because if one wants to live at the height of the times in leisure, one has to in work and vice versa.

To return to the beginning, it comes as a surprise to Americans that when we are faced with plenty we still find problems no less grave. It still takes nine months to produce a baby; it still takes time to develop anything worthwhile, whether this be a painting or a friendship or a talent or an interest. Walt Whitman wrote: "It is provided in the essence of things that from any fruition of success, no matter what, shall come forth something to make a greater struggle necessary."

SOCIAL CHANGE AND MOTIVATIONS FOR HAVING LARGER FAMILIES: SOME THEORETICAL CONSIDERATIONS¹

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In recent years there has been an increase in the size of the American family. This is especially marked in the middle class where more families have three or four children than formerly. Furthermore, it has been established that this increase is due not only to medical advances or to ineffective family planning; it is largely the result of choice. Freedman, Whelpton, and Campbell (8), interviewing a national sample of married women between 18 and 39, found that almost three-quarters of their sample *expected* to have families of two, three, or four children; a similar number felt that three or four children would be *ideal*. The authors also reported that the number of children considered ideal has increased even since 1941 when 27 per cent considered four or more children ideal; in 1955, as many as 49 per cent considered four or more ideal.

The increase in family size is usually assumed by writers on the subject to be the result of technological advances and economic prosperity which have removed some of the hardships of parenthood. This view assumes that there is a relatively unchanging desire for large families and that fertility rates are determined by whether the current social setting facilitates or impedes the expression of this desire. However, it is possible that the very *motives* for reproduction are not fixed but respond to social change, and that the current increase in family size is in part a reflection of increased motivations for larger families.

Studies of motivations for reproduction can be broadly classified as psychoanalytic and demographic. The psychoanalytic studies (1, 2, 3, 5) have been concerned with motivations for pregnancy *per se* rather than for having large families, and all of them have tended to view the motivation for reproduction as fixed—more or less unresponsive to the social milieu. The demographic studies dealing with psychological motivations (12, 14, 16, 17, 19, 20, 21, 22) have been interested in family size and in fertility *trends*, but they have not related the psychological motivations investigated to social change.

¹ The authors wish to thank Joseph Adelson, Ronald Freedman, Gerald Gurin, Martin L. Hoffman, E. Lowell Kelly, and Elliot Mishler for reading an earlier draft of this paper and making many helpful suggestions.

The approach presented in this paper deals specifically with motivations for having larger families and with the social changes that may underlie these motivations. (Thus, only those facets of the motive for reproduction which might be seen as responsive to recent social change and which seem most relevant to having three or more children will be taken up.²) We will consider three groups of social trends that may have influenced women's attitudes toward maternity: changes that have occurred in the woman's role; changes in the parent role and the concept of parenthood; and the loneliness and alienation that seem to characterize individuals in our society.

CHANGES IN THE WOMAN'S ROLE

Technological advances have brought about the following changes:

1. Housework has become less time-consuming.
2. The remaining household tasks are the duller and most uncreative (e.g., dusting). Areas where formerly a woman could make a special contribution as homemaker have been lost through the greater availability of commercial products (e.g., package mixes) and through standardization of techniques (e.g., the modern cookbook).
3. There are more women employed outside the home and greater opportunities for women to find such employment.
4. A housewife's time has potential monetary value, and, because of mass production efficiencies, performance of tasks in the industrial setting is more efficient than their performance in the home. In most cases, it is more economical for the woman to work for wages and buy commercial products than to spend her time making the products at home for her own family.

These conditions mean that being a housewife without children or a mother whose children are all in school is not a full-time job, not a creative job, and not a functionally efficient job.³ This was not the case thirty years ago, nor is it true today for the woman who has a preschool child.

At the same time a change has taken place in the notions of what a woman should expect from life. There seem to be more opportunities and desires for personal happiness and self-fulfillment. Perhaps "choice" and "freedom" are the key words. A woman's life has become much less circumscribed. There are more choice points in her life, more paths available, more

² Mishler and Westoff (14) point out that decisions concerning the first and third births are especially significant for population trends. The decision regarding the first child is usually one of timing. This would probably affect eventual family size only in that it influences the age and circumstances of the couple when the decision for the third child is made. Thus, it seems more parsimonious in the present context to consider these factors as they influence the decision about a third child at the time the decision is made, rather than to study the original reasons for the timing of the first birth.

³ These points are discussed in more detail by Cyrus (4), and data supporting them have been reported by Hoffman (11).

opportunities for activity and impulse expression; and the possibility that she will make the accompanying decisions for herself is greater. These are not, however, unmixed blessings; presumably they can produce doubt and anxiety, as Fromm, among others, has suggested (9).

In addition, the Protestant Ethic seems to be still very much alive in the United States.⁴ In some ways it may be stronger than ever. The present-day "idle rich" are more likely to be involved in public works than in the pursuit of sheer pleasure. The conspicuous use of leisure seems to have become the creative or efficient use of leisure. The do-it-yourself projects are not just an answer to inflation but have become a sign of the productive use of leisure time and a great source of prestige and esteem. There seems to be an orientation toward a full and useful life which combines creativity and contribution.

To these we add another consideration: the woman of today who has borne two children is younger, more attractive, healthier, and more energetic than her mother or grandmother was after her second child, and she has a longer life ahead of her.

What can this young and vigorous woman look forward to when her second and last child enters school? If she does not choose employment, she can anticipate a life of housework which she very likely considers dull, or at least an insufficient contribution to her family or the world. For some women, particularly in the upper middle or upper class, unpaid work in voluntary organizations may fill out their lives. Many women, however, who do not choose employment, may feel they have chosen a path of "boondoggling," and their neighbors will disapprovingly concur. Work is virtue. The mother of five children and the employed mother are both hard workers, but the mother of two school-age children who is not employed is a woman of leisure.

In contrast, having a child is highly creative—both in the physical sense of producing it and in the social sense of molding it. The decision to have another baby is a decision to break the established daily routines. With a new baby the woman introduces a major change in her life and in the lives of her family. Furthermore, the care of the infant provides an area where the woman is not replaceable. In America, few other persons would be entrusted with the total care of an infant. In addition, the care of a very young child is a full-time job, and while it often may not seem efficient, there are no acceptable alternatives.

Thus, the third (or later) child may be the expression of a need for creativity or for change. This child may be an escape from outside employment, boredom, unwelcome leisure, guilt about inactivity or non-contribution, and censure. It may also be an escape from independence, impulsivity, and, very much as Fromm discusses it, an "escape from freedom."

⁴ Empirical evidence for this is presented by Morse and Weiss (15).

In addition there is today a considerable diffusion of sex roles and the definition of the woman's role is ambiguous. Bearing and mothering children are important as proofs of femininity. Not only is this the traditional feminine role, but it is now especially important because it enables the woman to avoid entering the occupational role. Employment may involve competition with one's husband and the woman may want to avoid this, not for fear of losing, but for fear of winning. The need to perceive the man as more competent is deeply rooted, and, if the woman's employment is a potential threat to this perception, it will be avoided in order to preserve the woman's sense of femininity, the man's masculinity, and the integrity of the marriage.⁵ Thus, since employment is such a viable alternative, some women will be motivated to have a large family in order to avoid employment.

Mishler and Westoff (14) offer the hypothesis that excessive dependency needs are incompatible with the desire for pregnancy. The formulation presented here would lead to a different expectation. The third child can be seen as a prolongation of the period of the mother's dependency in relation to the husband. Not only is pregnancy itself an opportunity for the legitimate expression of dependency needs, but to the extent that remaining at home is a more dependent relationship to the husband than employment, prolonging this period prolongs dependency. This is assuming that we are not dealing with pathological dependency where legitimacy of roles is not a consideration. While extreme dependency needs might allow the woman to languish in the traditional role of full-time homemaker with no young children, occupation, or community activities, she must be prepared to defend this position to herself and her friends or acknowledge her self-indulgence. Furthermore, personality needs are usually not unidimensional, and seemingly opposite tendencies often coexist. Thus, for some women the dependency dimension is a salient one but it involves both needs for being dependent on others and having others dependent on oneself. For such women, the ideal situation might be having an infant dependent on them while, at the same time, both the infant and the mother are dependent on the father.

CHANGES IN THE PARENT ROLE

In the past decade the United States has become increasingly a child-centered culture, and a closely related development is the popularization of psychology. The role of the parent in socializing the child has been emphasized in the popular culture to the point where theories about heredity are now rarely heard. The stress on child rearing and the widespread conviction that a child is what his parents have made him have had two important effects on the parental role. First, they have added challenge and importance to the child-rearing function, making it a creative and

⁵ This point is discussed in more detail by Hoffman (10, 11).

ego-involving area, for mothers at least. Being a "good mother" no longer means simply keeping the children fed and clothed but implies that one is skilled in a mysterious and difficult art. The creative aspect of the mother role is particularly important when highlighted against the background of the increased standardization and mechanization of the housewife role and the increased desire for self-fulfillment, mentioned earlier. Thus some women will be motivated for motherhood because of the challenge it imposes, this challenge being all the greater in contrast to other aspects of the woman's role.

At the same time, and largely because the skills for being a good mother are not being communicated at the same rate as is the emphasis on being a good mother, the child-rearing function is fraught with anxiety. Paradoxically, this very anxiety may operate as a motivation for reproduction, particularly for later pregnancies. The rare mother who is satisfied with her performance in rearing the first and second child may either have more children because of the gratifications it offers, or cease to, in the knowledge that she has done well. Many mothers, however, will, consciously or unconsciously, be disappointed with their handiwork, guilty and anxious about their failures. People respond differently to anxiety, but the situation often limits the possibilities. For example, the mother cannot run away from the child who is the focal point of her anxiety. A more appropriate solution is either to try to do better with the next one or bury her anxiety in activity. Both of these are well served by having many children. With many children, she has less involvement in one, more chances to alleviate her own sense of responsibility through the individual variations offered by her products, and less time to experience anxiety. Furthermore, it is likely that her job performance does improve with practice and so this particular defense may be reinforced by reality. In addition, the attention of others, and perhaps even her own involvement, may become focused on the quantity rather than the quality.

A trend that is closely related to the emphasis on the parent's responsibility for the child's personality and to the filtering of psychology to the grass roots is an increased acknowledgment of hostile feelings toward one's own parents. Analytic writers have sometimes discussed the first pregnancy as a hostile wish to replace one's mother. There is a modern way that child bearing can express hostility toward the mother. Today's young woman who has more children than her own mother and who often does so with a show of greater ease (e.g., being physically active throughout her pregnancy) says in effect to her mother: "What was all the fuss about? I can do a better job, on a bigger scale, and with very little effort on my part." Thus, the larger family may be an expression of hostility toward the mother. Such inter-generational conflict may not be new except in form. It is possible that the generation which mothered two-child families had exactly the same motivation, but since their mothers had large families instead of

small, the form of their protest was different. These women may have been saying in effect to their mothers: "I am intelligent enough, genteel enough, and sufficiently in control of my own life, that I can have only one or two children instead of seven."

There is one other way in which the particular emphasis on child rearing might operate as a stimulus to the motivation for larger families. The modern young mother is neither drudge nor disciplinarian but warm, active, and a companion to her children. This is a more attractive model for a woman and, hence, the mother role is a becoming one. The slim, vigorous, well-groomed woman with four children has an advantage over another woman who is not a mother. This latter point may be true only because of the transitional nature of the present situation where the stereotype of the haggard mother still exists as a contrast. Attractiveness in a mother seems doubly attractive, and the more children, the greater the emphasis to her attractiveness.

THE LONELINESS AND ALIENATION THEME

Several contemporary writers have discussed a "loneliness" and "alienation" quality as characterizing modern life. Briefly, this is described as feeling insignificant, lost and alone. This is not a new trend on the social scene, nor is it new to social scientists. Durkheim discussed it over fifty years ago (7). Like Fromm after him (9) he attributed it, in part, to Protestantism and to the lack of group affiliation. More recently, Riesman has similarly discussed it in connection with the breakdown of moral traditionalism (18). The loneliness and alienation of modern man have also been attributed to changes in productive modes, the complexity of modern politics, urbanism, the loss of religious conviction, the absence of extended family ties, and increased geographical mobility. Thus, while it is not a new trend, it may be an evergrowing one, and we will consider it as a possible basis for fertility motives.

Pregnancy itself is in some ways the fulfilled fantasy of the lonely child. The pregnant woman has a secret companion who is hers alone. The companion is always with her and communicates only to her. Like the imaginary friend of the lonely child, it is a creature of her own making.

Even after the child is born, elements of this fantasy continue. The infant's total dependency on the mother may suggest almost a fusion of the mother with the child. This is related to our earlier suggestion: for some women, having a child totally dependent on them is highly gratifying; at the same time they find it gratifying to be dependent themselves. Both circumstances involve close relationships, the antithesis of loneliness. Although these motives may not be readily articulated, they may help to make pregnancy and mothering pleasurable experiences both in the past and in anticipation.

Furthermore, a child may represent a tie between the mother's life and "immortality." Modern man may feel himself to be insignificant—sometimes acutely and depressingly aware of the evanescent quality of life. The creation of a child may involve the feeling that something of the self will continue after death. This theme has been explicitly put forth in certain religions, and it may operate independently among many persons. This motivation for fertility is not a new one, but it may be one that has become increasingly important as the belief in the "hereafter" loses ground. Another motive for pregnancy may be the desire to recreate the self. The child represents to the mother herself as a child. This brings the mother still closer to "immortality" and at the same time involves a connection to the past: the child that the mother once was is re-created and will live on after she is dead.

Since the child develops out of the mother and is at first entirely a part of her, the mother is sometimes able to envisage herself in two roles at the same time. She can feel as *mother* with all attendant rewards of status and self-regard and she can feel as the *child*. She can in this way relive her own childhood and give herself as child all the love and affection which she wanted in her own life, but did not always receive. In short, by having a baby, a mother has an opportunity for remaking her own life in fantasy. She can treat her infant as she wanted her mother to treat her. Women also imagine sometimes that in the child they are reproducing the husband in order to be his mother. In all these instances women repeat characteristic fantasies of their own early girlhood.

There is one other motivation for children which seems to have significance for avoiding feelings of aloneness. Participation in a secret ritual and entering into a special status group have often been thought of as means by which aloneness is avoided through merging the self with the group. Both Durkheim (6) and Fromm (9) talk of this in explaining the existence of certain social institutions. Motherhood itself is such a group; the ritual is the bearing of a child. Through childbirth and child rearing the woman joins a special society. The society has many members and with each of them she automatically has common bonds. Kluckhohn (13) has discussed the advantages a woman has in an unfamiliar culture in establishing rapport with other women. These advantages come from sharing a common status with similar role prescriptions. Thus, simply by becoming a mother, a woman becomes part of a group and has a bond with many other persons. Furthermore, with successive children one joins more exclusive groups with whom there are even closer bonds and one does not lose membership in the larger group. In fact, with each successive child one gains a certain amount of status as an expert ("Yes, it was that way with my first, but you'll find with the second . . .").

Most of the motivations that have been organized around the loneliness theme do not deal specifically with motivations for successive children.

However, the gratification of these needs with the first birth may make pregnancy and mothering events of great pleasure. Thus the motivation for later pregnancies may be the recapturing of this gratifying experience.⁶

SUMMARY AND IMPLICATIONS

It is our view that the recent increase in family size in America may reflect in part a change in women's motivations for reproduction and that this change may be a response to certain social trends. The first group of trends we discussed dealt with some of the changes in the role of women which have resulted from technological developments. Thus, for many women the role of housewife has ceased to be a satisfying or even legitimate full-time pursuit. In addition, maternal employment has increased to the point where it is a conscious possibility to most women when their youngest child enters school. In combination, these trends mean that the woman may have to choose between the housewife role and the employment role. For those women who view both alternatives negatively, having another baby can postpone the choice. The new baby represents an opportunity for the woman to avoid employment and leisure, to have a socially acceptable role which is creative and demands her very special attention, and also enables her to remain dependent and to continue in a traditionally feminine and circumscribed pattern.

We have also taken the cultural emphasis on child rearing and the prevalent belief in environmentalism and the importance of the mother's role as a social trend that may influence fertility rates. Thus creativity and significance have been added to the role of mother just at the time they are disappearing from the housewife role. Even the anxiety which many mothers feel as a result of this emphasis may provide a motivation for larger families through the desire to have a less intense investment in one child and to bury the anxiety in activity. Furthermore, modern child-rearing notions with their greater emphasis on warmth and companionship have made the mother role a more becoming one. Thus, technological advances have removed much of the drudgery from both the mother role and the housewife role, but modern views of child rearing have added new meaning to the mother role while the housewife role has been left empty of potential gratifications.

Several social trends have been seen by social scientists as leading to feelings of loneliness and alienation. We have pointed out how pregnancy and motherhood might provide satisfactions for the needs induced by these feelings. Thus a new baby or a large family may mean to the mother

⁶ Also of relevance to the theme discussed in this section is a point made by Ronald Freedman that the family itself is important as a primary group anchor in avoiding loneliness and alienation. The family of procreation has become the only primary group with any permanence. Therefore, the desire for the larger family may be a response not only of women, for whom reproduction has a special significance, but also of men.

companionship, a fusion of the self and the child, a tie with immortality, and a meaningful status in society.

We would not expect that these social factors will affect all women equally. First of all, fertility is not always a matter of free choice. Subfecundity, religious attitudes against birth control, and ignorance about contraceptive methods may all influence fertility rates. Secondly, social trends may affect certain segments of society more than others. There may be some subgroup variations in the amount of time required by the housewife role and in its potential for creative satisfactions; for some groups the employment alternative will be more viable than for others; child-rearing beliefs are not uniform; and the social conditions that lead to alienation vary. Thirdly, there are personality differences that are relatively independent of the social trends although they interact with them in determining the attitude of the mother toward having another child or toward planning a large family. Thus, for example, a need for dependency may provide a motive for pregnancy only because of the existence of pressure toward employment.

Because of these subgroup differences and individual personality differences, much of this theory could be tested within the current social setting. Specified groups could be compared as to attitudes toward pregnancy and toward having another child as well as to actual fertility rates. These groups would be defined in terms of their social situation (e.g., the child-rearing beliefs prevalent in the individual's social milieu, maternal employment rates, geographical mobility, ties to the extended family) and in terms of personality factors (e.g., the woman's feelings about leisure, impulsivity, femininity). We would expect these social and personality variables, which reflect and interact with the social trends, to influence the meaning of a new baby and a large family.

In addition, the theory presented here has certain implications for social prediction. It suggests that the recent increase in family size, particularly in the middle class, reflects not only economic affluence but also an increased desire for children. It is not merely that having children is less burdensome; they are actually wanted more. If this is so, it has considerable significance for predicting population shifts. For example, if certain social trends have brought about an increased desire for reproduction, an economic recession without a corresponding change in these trends might fail to bring about a decrease in family size. If the motivation for large families is strong enough, many other "luxuries" might be given up before giving up the "luxury" of a third or fourth child. On the other hand, if economic hardship succeeded in bringing about a decrease in family size, this response might prove costly in terms of mental health.

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**SOME CURRENT RESEARCH AND THINKING ABOUT
COGNITIVE PROCESSES IN CHILDREN:
A SYMPOSIUM**

INTRODUCTORY COMMENTS

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The following papers are modified versions of presentations at the 25th Anniversary Meeting of the Society for Research in Child Development at Bethesda, Maryland, in 1959. Dr. Sigel and the writer had independently arrived at the conclusion that the revival of interest in cognitive processes had produced sufficient research to warrant more attention to the significance of these processes for child development. The primary purpose of the symposium¹ and of these papers was, then, to present current thinking and research on selected aspects of cognition and cognitive development in children. Our major intent was to stimulate and focus the curiosities of researchers on some of the neglected problems associated with cognitive development and, at the same time, to facilitate communication in this area between psychologists and child developmentalists.

In recent years child developmentalists and child psychologists have been particularly self-conscious about the lack of theoretical integration of the data in their area and the relative isolation from general systematic psychology of conceptualizations and research relevant to child behavior. As a result, workers in these fields now appear to be more interested in current theoretical and research trends in psychology. Continuation of communication flow between child development and psychology, however, depends upon all of us taking the time, and making available the opportunity, to look beyond personal scholarly interests. Otherwise, conditioned myopia will increasingly narrow our cognitive maps and promote isolationism from the main streams of psychological theory and research.

One of the areas in which remarkable strides have been made by psychologists recently is the systematic study of perceptual-cognitive processes. The revival of interest in the "higher mental processes" is attributable to many factors, but recent theoretical advances (such as information theory) and psychology's increasing concern with identifying, integrating, and

¹ We regret the fact that Dr. Alfred Baldwin's paper entitled "Development of Abstract Thinking in Children" was not available for publication.

systematizing the variables underlying complex behavioral phenomena have been the major influences. The Colorado Symposium on Cognition (5), the work of Bruner *et al.* (3) and Heider (8) provided the immediate stimulus which oriented psychologists toward systematic research relevant to perception, concept formation, "thinking," and problem solving. Neither child psychologists nor developmentalists can afford to ignore the important conceptual and factual advances characterizing recent work in these areas.

Most psychologists would accept the general definition that cognition refers to those processes whereby the organism achieves, transforms, retains, and utilizes information from the environment (2). Thus, the study of cognitive processes is directed toward discovering those variables which influence how external events are translated into internal events in the form of phenomenal organization, the conditions under which different organizations occur, and the functional relationships between these representational factors and behavior. The study of developmental variables associated with these various processes will, at the very *least*, provide further research problems and hypotheses for psychological theorists. While neither Piaget nor Werner has been a particularly potent influence in the *recent* revival of interest in cognition, developmentally oriented conceptualizations and research undoubtedly will have an increasingly important impact on the direction of both research and theory (1, 6, 7, 13, 14, 16).

The implications of these trends in the study of cognition for child psychologists and child developmentalists are clear. Martin in a recent paper put it this way:

... there is evidence from a variety of sources that there is in the making a cognitive theory of behavior and development. It will view the child not merely as a passive victim of either his environmental history or of his biological nature but as one who strives to be the master of both his nature and his history. It will thus emphasize the unique characteristic which makes that mastery a possibility, namely, intelligence. It will be a science of man that includes man. To the development of such a science, research workers in child development should have a significant contribution to make. For they are, by training and by commitment, both scientists and humanists. As such, they are in a most favorable position to humanize science and to bring an end to the mechanization of the human being (12, p. 75).

It would be most unfortunate should child psychologists fail to take this opportunity to make such contributions to the theoretical understanding of human behavior and, especially, of psychological development during childhood.

I should like to emphasize this point because it occurs to me that the relative neglect of the study of cognitive processes in children can be attributed to two factors: (a) the primarily applied orientation that has pervaded child psychology for so many years, and (b) linguistic and methodological immaturity similar to that characterizing psychology during the not too distant past. The impact of the first factor has been discussed often and

thoroughly—probably to the extent of overemphasis—so I only mention it in passing. The second factor appears, to me, as not only a more current influence but one that may have a much greater impact on research with children. This would be disconcerting to say the least. There is no need for child psychologists to fall into the trap—a *narrow* conception of operationalism—out of which most psychologists have only recently escaped.

In the early 1950's, for example, many psychologists were convinced the problems and issues exposed by "cognitive" theorists during the 1930's and 1940's had either been identified as "pseudo problems" or assimilated into existing behavior theory. The logic and reasonableness of Kendler's (10) analysis of "what is learned" apparently was so convincing that few psychologists gave attention to the methodological soundness of Tolman's position on the same problem or to Campbell's operational delineation of the "what is learned" (4).

Karl Muenzinger in his introductory comments at the Colorado Symposium sums up this whole series of "what is" questions quite succinctly: "From the point of view taken here, this was a concerted attempt to 'discover,' if you please, the referent of the word 'learning.' The series [of papers] was not concerned with the nature of the various referents that were suggested, but essentially with the usage of a term [learning]!" He goes on to say that psychology as a science would be more rapidly advanced if the time and effort spent on such arguments were spent on the study of the nature of the *referents*. Questions concerning the most useful of the alternative concepts then would be answered on the basis of its fruitfulness for integrating obtained empirical relationships. For example, data relevant to the role of verbal labels in discrimination learning may be interpreted in terms of "acquired distinctiveness" of cues or "perceptual differentiation." Controversy over these alternative concepts need not, and premature attempts for integration (9) should not, distract from the primary task of determining the ways in which selective properties of the stimulus configuration are combined with prior perceptual integrations and acquired labels to permit the child to generalize from one perceptual experience to another.

The recent suggestion (15) for more "simplicity" in research with children is in the main contrary to this point of view. All of us, I am sure, find it difficult to disagree with arguments for more *operational clarity* in the definition of theoretical variables, or with additional pleas for more emphasis on experimental analysis of child behavior. Beyond this, however, I insist on retaining certain freedom of choice—choice in the conceptual scheme most helpful for furthering understanding of the particular psychological processes that interest me. Now, "simple" behavior and "simple" experimental operations are two quite different things. McCandless and Spiker (11) have clearly defined the intimate connection between theory and methods, but the choice of *behavioral units* also depends upon one's conceptual frame of

reference and is prior to the selection of methods. A "simple behavior" like an eyeblink *may* reflect nothing more than a so-called "conditioned reflex." It may also be an "indicator" of the arousal of a complex need, modified and developed over a period of years, e.g., if intentionally emitted by a pretty female at a social gathering. To insist that eyeblinks be studied, or studied only under "simple" conditions, is to impose theoretical limitations on the definition of response units (i.e., peripheralism) which would exclude cognition, among other complex and molar processes, from the province of psychological analysis of child behavior. The trend in psychology is away from this orientation. Current research on cognition, such as that reported here, supports and strengthens the fruitfulness of a less restrictive methodological position. In the final analysis, of course, the extent to which the selected response units are valid indicators of nature (i.e., of the underlying psychological processes) will decide the issue.

The following story will help me to summarize, and perhaps clarify, these issues as I see them. A small boy sitting in a church was seized with an attack of coughing and sneezing. His mother administered the usual jab with her elbow and sternly told him to cover his mouth when he sneezed. Being a curious child, Jimmy asked "Why?" Mother replied that the handkerchief prevented the spread of germs. Jimmy's comment was: "Gee whiz, Mom, all I hear is 'Jesus' and 'germs,' and I've never seen either of them." Of the several morals in this little story, two are particularly relevant here. First of all, what we "see" depends upon what and how much we know, as well as available methodologies. Secondly, which of several currently useful concepts will be of eventual scientific value can not be decided *a priori* by psychologists or philosophers of science. As long as the research and thinking of child psychologists is focused on attempts to discover the nature of the referents of fundamental facets and ontogeny of "thinking" processes, knowledge will be advanced irrespective of whether or not the original conceptual basis of the research proves fruitful.

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OBSERVATIONS ON METHOD IN CHILD PSYCHOLOGY¹

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Recently McCandless and Spiker (4) have criticized the research status and conceptual sophistication of the field of child psychology. They have pointed to the lack of clear specification of variables, inadequate definition of terms, avoidance of systematic experimentation, reluctance to employ deductive methods, and overconcern with applied problems as reasons for lack of scientific progress. While the criticism is eminently justified, it would be unfortunate if workers concerned with comparative-developmental psychology were to substitute for the relative sterility of the normative approach attacked by McCandless and Spiker, the restrictive research model which they propose. They suggest systematic experimentation within a deductive framework. This is undoubtedly a meritorious ideal. However, when implemented it results in excursions largely confined to, and governed by, the axioms of conditioning theories. The model tends to be restrictive with respect to method and procedure as well. For example, it relies heavily on instrumentation inherited from the rat laboratory and thereby tends to avoid capitalizing upon the response and apprehension capacities of human subjects.

The deductive-experimental model is a powerful and rigorous tool and may ultimately become the method of choice for most behavior research. It has yielded major contributions to knowledge and ought to be utilized whenever conditions are appropriate. However, in view of the nature of the problems confronting the field of developmental psychology, considerable loosening of theoretical nicety and methodological restrictiveness is indicated. As Hebb (3) has noted, research may be systematic with the aim of ordering knowledge or exploratory and developmental with the aim of broadening and deepening knowledge. There is an urgent need for the latter type of research not merely to complement the former but to lead it. The transposition investigations offer a good example of the kind of lead that *looser* relational formulations may provide for more systematic work like the studies conducted by Spence and his students.

Similar leads abound within the relatively unsystematic and sometimes vague formulations of developmentalists like Piaget and Werner. The stress

¹ The research reported in this paper was supported by grants from the National Science Foundation.

of these theorists is comparative—they are in the tradition of evolutionary psychology—they place emphasis on shifts in process or intervening mechanism which are alleged to reflect *stages* or *states* of the organism. *State* is probably a better term than *stage* since it implies a continuously available mediational system rather than one which is replaced by another. Developmental theorists contend that mediational systems arise in a genetic sequence as a function of biological changes accompanying ontogenesis, or as a function of environmentally instigated masteries, or as is probable, as a function of the interaction of maturational and experiential factors. These states are not usually constructs in the formal sense: they are frequently descriptions of response, occasionally they refer to neurophysiological or physical correlates or substrata, and in some instances they have the character of inferred central events. When state is used in this last sense, it is often as a "limiting" factor or construct: that is, it imposes the assumption of certain restraints upon performance. Werner's analysis (6) of the development of grouping behavior contains the implication of limitations upon performance. The young child, when called upon to group objects, acts "as if" his behavior was determined by the quasi-automatic attraction of "equal" elements. His behavior may be said to be governed by the Gestalt law of Equality. Young children have great difficulty in shifting from groupings based on perceptually conspicuous properties of objects to groupings which transcend these properties. Further development (experiential, biological) will add to the perceptual-automatic grouping facility a conceptual-intentional facility which, while not replacing the former, will to some extent subordinate it. Older children and adults should be able to make more shifts in grouping than younger children and should be able to group in categories not dependent upon obvious sensory qualities. It need not follow, of course, that the particular "theoretical" statements of developmentalists are adequate—it is the comparative approach in conjunction with the "theoretical" statements that determines selection of subjects and selection of stimuli and produces data which are challenging and provocative.

Hebb and Razran, working from different vantage points, have made observations which emphasize the need for comparative analysis and concurrent variation of test methods. Hebb reminds us that if a chimpanzee and a rat are successfully trained to look for food behind a white triangle, testing them later with other stimulus objects indicates that their perceptions of the training stimulus differ: the chimp will now make adient responses to a rotated triangle and to a black triangle—the rat will not make such responses. The two-year-old human child, similarly trained, will respond positively to a stimulus even if it is a triangular configuration of dots. Hebb concludes that the mechanisms determining the original responses must therefore be different (3).

Razran postulates the existence of three kinds of learning: Pavlovian, instrumental, and cognitive. He regards these as constituting levels of

learning: the Pavlovian is universal, machine-like, largely nonadaptive, and the first to emerge both in evolution and in ontogeny; a second evolutionary level, the instrumental, is less ubiquitous, more adaptive, and represents a later emergence in phylogeny and ontogeny; and finally, the third and last type of learning involves cognition and volition. Razran writes: ". . . but also, I would say, an unbiased examination of total evidence supports a hypothesis of three evolutionary levels of learning in which as one goes from the first to the third, one meets with lesser universality but greater efficiency, and in which a lower level does not disappear with the emergence of a higher but coexists with it, thereby generating a variety of conflicts and cooperations in a variety of concrete situations (5)."

Razran, like Hebb, assumes that a variety of neurological mechanisms are involved in the diverse behaviors which are described, and that each of the behaviors will become prominent as a function of the phylogenetic or ontogenetic status of the organism and as a function of the task set for the organism.

The argument is sufficient, for the present, to indicate the risks of obscurantism which arise if research is confined to the hypotheses generated by a one-kind-of-learning conditioning theory with an axiom set that largely excludes biophysical considerations and virtually ignores specie differences.

Several examples of research are cited below as illustrations of comparative-developmental methodology and its empirical fruitfulness. In each experiment an attempt was made to construct simple and complex versions of a task, and to present these versions to subjects representing different developmental levels.

TACTUAL FORM DISCRIMINATION

Two tactual form discrimination tasks were presented to seven-to-eight-year-old children and to adults selected from college classes. The forms were made by hammering raised metal tacks onto plywood boards. In Task A, S explored twenty pairs of forms with his hand. The members of each pair were explored successively and S was requested to report whether the pair members were the same or different. In half of the pairs the members were identical and in the other half they were different. In Task B, the procedure was identical with the A task except that a number of discriminably larger tacks were scattered about the "figure" of one member of each pair. Discrimination scores in both tasks were based on the number of correct judgments made by Ss. Adults made the same number of correct responses in both tasks but the children showed a significant drop in correct discriminations on the B task. They appeared to have great difficulty in disregarding the spatially distributed interferent tacks (2).

VISUAL RECOGNITION OF MEANINGFUL OBJECTS

Fifteen common objects, e.g., table, chair, umbrella, etc., were drawn in ink on white cards. The contours of the objects consisted of a series of

small crosshatches. The entire surface area of the card was also covered with crosshatches. Preschool children and adults from college classes were asked to identify the objects represented by the contours. All Ss readily identified the objects when only the contour lines were present. The children had far greater difficulty than the adults in recognizing the objects when the obscuring crosshatches were introduced (1).

COPYING LINE DRAWINGS

Figure 1 shows the stimulus patterns used in the copying tasks. The grids on which the patterns were drawn were prepared by a multilith process and the patterns were made with black ink. The dimensions of each grid were 4 in. x 4 in. Each stimulus pattern was presented for an unlimited time with the instruction to make one just like it on the blank grid provided for the S. Wax marking crayons were given to each S. The first five stimuli were designed to assess motor skill. The other patterns were designed to discover the effect of configural complications on copying performance. Ss were given the opportunity to make a second copy if they expressed any dissatisfaction with their first effort. On the day following the copying a matching test was given. The stimulus was presented together with S's copy and three other copies, one of which was an exact reproduction drawn with the crayon. The purpose of the matching test was to determine if the children had "sensory" difficulties. Only in rare instances were there matching errors. If the child's reproduction was good it was sometimes chosen—in almost every case where the child's reproduction was poor the best copy was chosen.

Figures 2, 3, and 4 show the reproductions of three children. The selection of materials for presentation in this paper is intended to be suggestive, not representative. Figures 2 and 3 show the copies made by two children under 5 years who made no matching errors. Figure 4 shows the performance of an older child whose work was very accurate. The IQ data recorded on the figures is based on the Revised Stanford-Binet, Form M. Figures 5 and 6 were obtained by the same procedure described above but in this series the grid lines were thicker. These figures contain the reproductions of five children. Only copies of the last four patterns of the series are shown, although these Ss copied the entire series. These children were older than those whose work is shown in Figures 2 and 3. Their copies of the first four patterns were as accurate as the copies shown in Figure 4. Nevertheless, as the configural character of the patterns increased in complexity, there was a marked decline in the quality of performance, apparently as a function of the thickened grid lines.

Since this paper is primarily concerned with method, interpretive comment on the particular experiments will be avoided. Each of these techniques is exploratory and each introduces manipulable variables which, though interesting in their own right, are particularly significant in a comparative

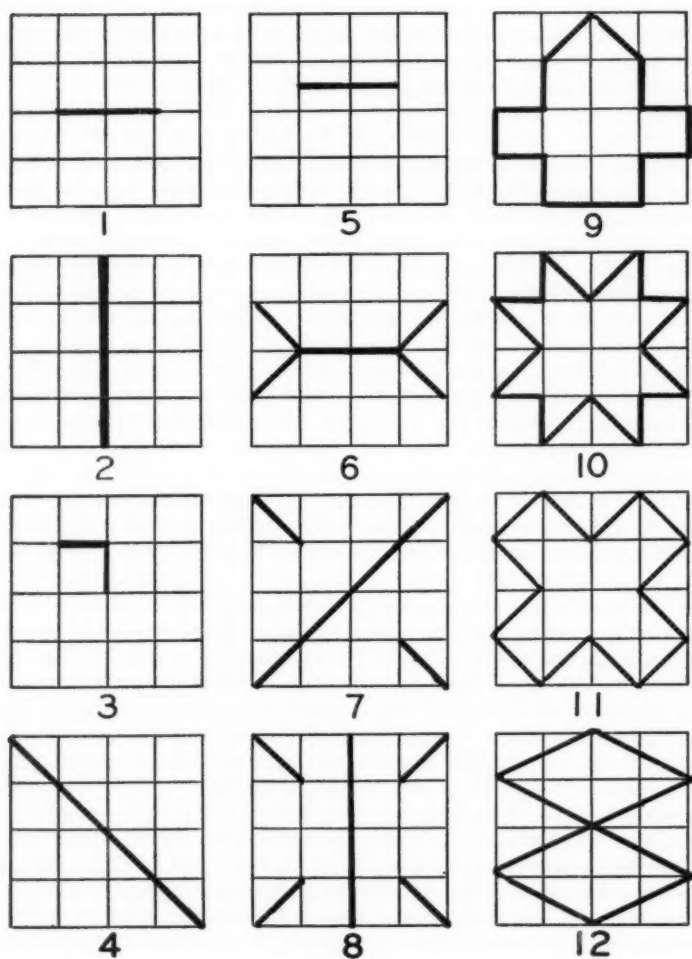
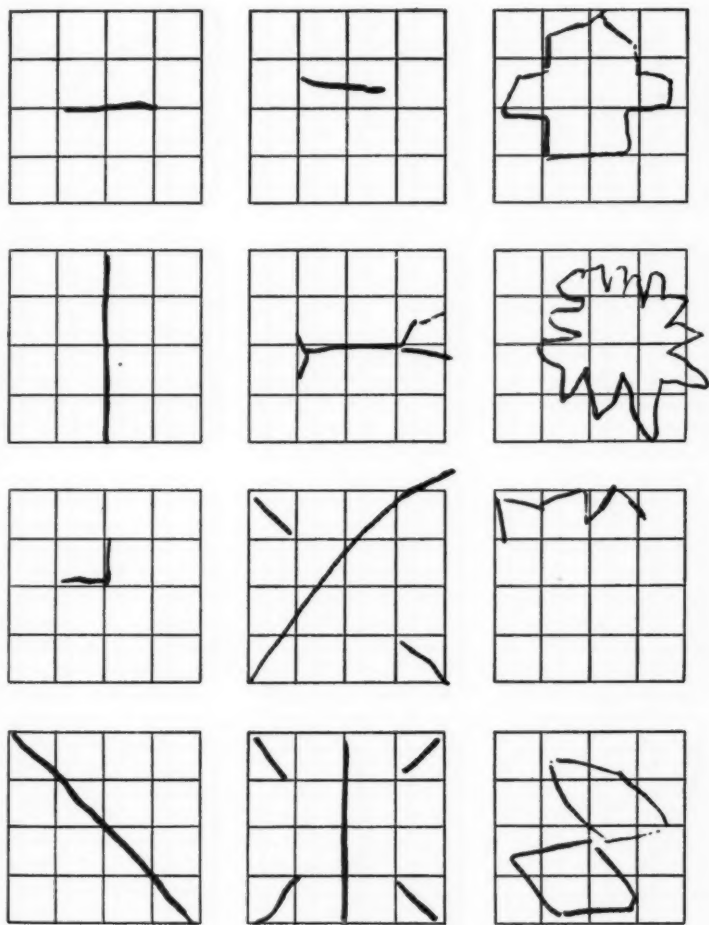
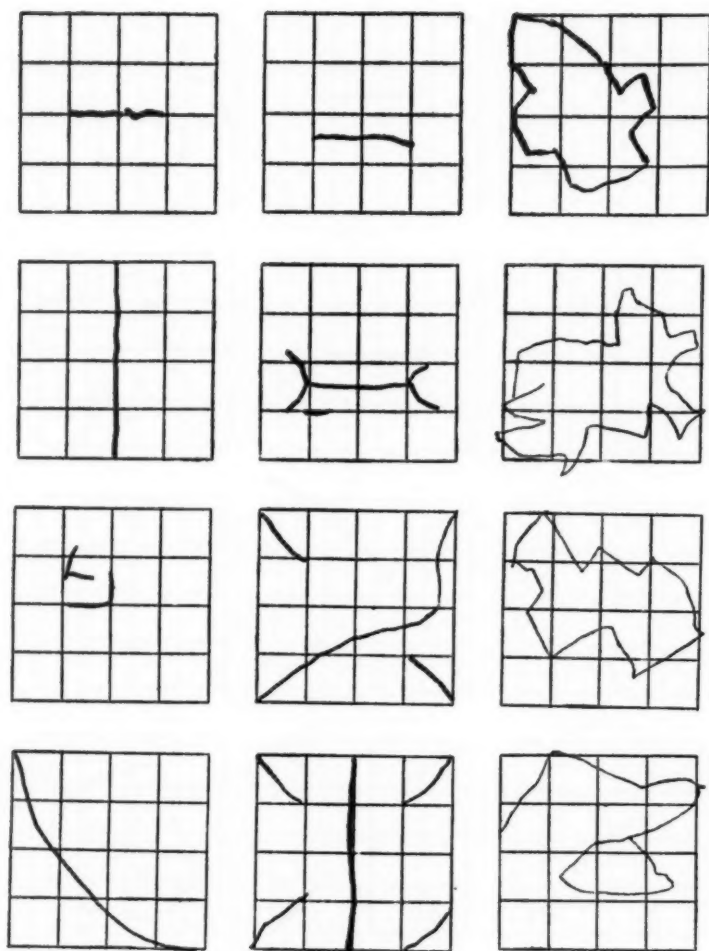


Fig. 1. Stimulus patterns used in the study of copying behavior.



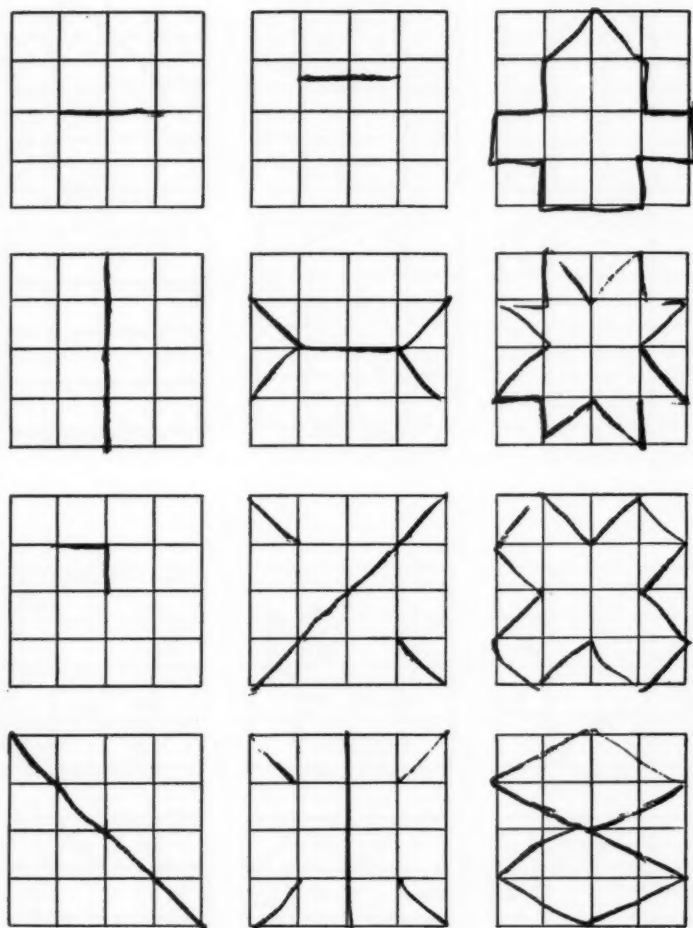
SUBJECT 35—C. A. 57 MONTHS—IQ 144

FIGURE 2



SUBJECT 11—C. A. 55 MONTHS—IQ 109

FIGURE 3



SUBJECT 1022—C. A. 80 MONTHS—IQ 108

FIGURE 4

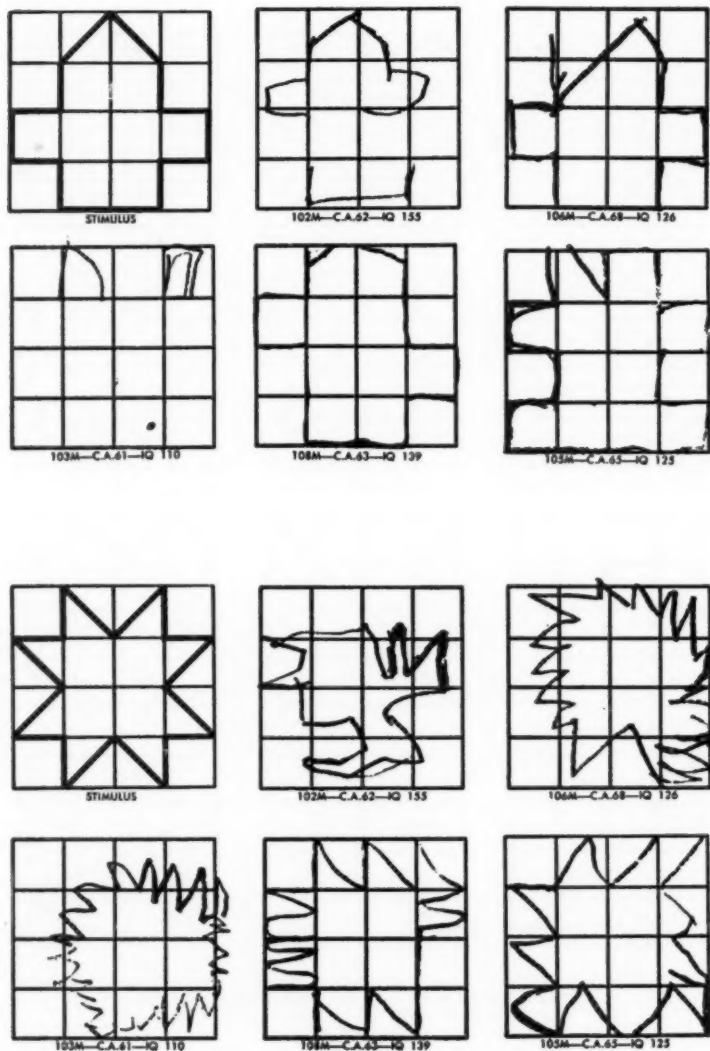


FIGURE 5

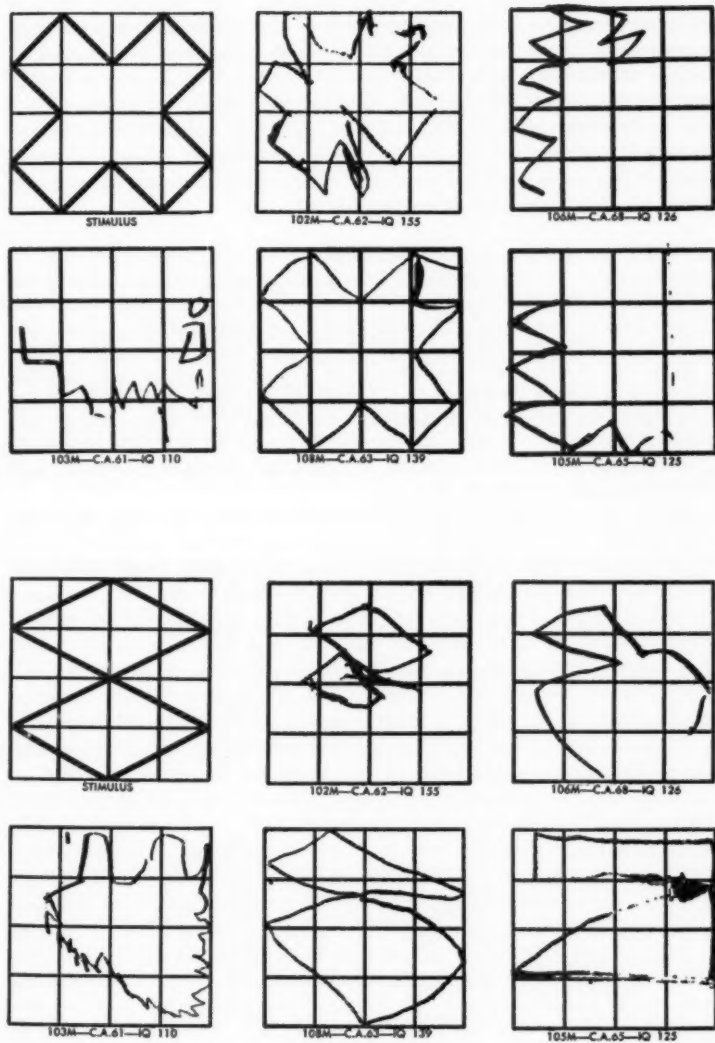


FIGURE 6

context. The pattern of spatial, and certainly temporal, distribution of stimulus features seems likely, when converted into systematic variable dimensions, to provide essential information about contemporaneous functioning. Once this functioning is clearly understood the introduction of practice techniques can be undertaken. In the task and subject context outlined, the relationship between practice variables and performance is likely to advance understanding of the process of behavior modification. These tasks demand effort on the part of the subject. They require an intensive degree of attention and are therefore likely to act as profound probes into the nature of behavior.

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CONCEPTUAL STYLE AND THE USE OF AFFECT LABELS¹

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Although the study of conceptual and language behavior has a long history in psychology, psychologists have usually been concerned with establishing population parameters for these response classes. Experiments were designed to establish the differential ease with which various concepts were acquired, the effect of irrelevant stimuli on ease of concept attainment, or the frequency of occurrence of specific language forms. Systematic study of individual differences in conceptual behavior was of subordinate interest. In recent years, however, there has been a growing concern with this research problem (3, 17, 24). In the areas of psychopathology, Goldstein's (7) abstract and concrete attitudes are a classic example of the psychological significance of differences in conceptual response. The work of Bruner *et al.* (3) indicates that nonpathological samples also differ in their mode of conceptual functioning. The recent volume by Kelly (15) places a person's cognitive "constructs" about himself as the major variables in personality functioning. Finally, the writings of psychoanalytic theorists (6, 8, 25) emphasize that conceptual processes may be independent of basic drives and influence the individual's mode of conflict resolution and the quality of his problem solving behavior. Thus, psychologists working with different theoretical orientations and different types of data agree that individual differences in conceptual behavior demand more systematic attention.

Most psychologists would probably agree that a conceptual response is *the organization of a stimulus configuration in order to arrive at a basis of similarity among a group of stimuli and the assignment of a symbolic label (usually a language response) to the organized pattern of similar stimuli*. The symbolic label or sign, whether overtly spoken or not, is an essential part of the conceptual process. Thus, concepts are labels for groups of similar stimuli. In most studies of conceptual behavior, the empirical data consist of the final step in the conceptual process, i.e., the labeling behavior of the individual, rather than the internal process of organization. Although people use a wide variety of labels to categorize stimuli, it is assumed that conceptual responses can be organized into a

¹ This study was supported, in part, by a grant (M-1260) from the National Institute of Mental Health, United States Public Health Service.

manageable number of basic classes. It is assumed, moreover, that in a given stimulus situation individuals will differ in their tendency to use one class of concepts as opposed to another, that is, they will differ in their preferred mode of organizing and labeling stimuli. The preferred use of a specific class of conceptual responses is called a "conceptual style." This term is similar to the concept of cognitive style as defined by Gardner, Holzman, and Klein, and their colleagues (5, 11, 17). A conceptual style implies a preferred mode of categorization in one stimulus setting, but styles may differ within the individual in different stimulus situations, e.g., tactile *vs.* visual stimuli, people *vs.* objects, motive related *vs.* motive neutral stimuli, conflictful *vs.* conflict neutral stimuli.

Goldstein's analysis led him to suggest that differences in conceptual behavior could be attributed to variation in an underlying hierarchical dimension of "abstract" or "concrete" attitudes. In a series of important studies, McGaughan and Moran (18, 20, 21, 22, 23), reject this single dimension (abstract *vs.* concrete) analysis and postulate two orthogonal dimensions of conceptual behavior, "public-private" and "open-closed." The public-private continuum is defined in terms of the communicability of the concept among all subjects in a given culture. Thus, the concept of "redness" is public since all members of this culture agree on the stimuli to be labeled "red." The concept "confused" is private because there is no generally accepted stimulus configuration for this label, and subjects may not agree on what stimuli should be labeled "confused." The open-closed continuum is defined in terms of the degree to which a concept permits the inclusion of additional conceptual groups of stimuli within it. The more a label "pins down" or defines attributes of a conceptual group, the more closed it becomes. Thus, a concept can be adequately described by its position in one of four quadrants: open-private, open-public, closed-private, and closed-public.

The McGaughan-Moran categories effectively differentiate the conceptual behavior of schizophrenic populations from other groups, with the schizophrenics producing a high proportion of private concepts. However, these categories have limited applicability for the study of concept formation in normals, for normals do not frequently produce private concepts in laboratory situations. Furthermore, we believe that "public" concepts include at least three different classes of conceptual responses. This paper presents a new scheme for coding conceptual behavior and some empirical data in support of this approach. The scheme includes two basic orientations, egocentric *vs.* stimulus centered, with three formal conceptual classes under each of these two orientations. In addition, each conceptual class can have a substantive or denotative meaning. The two basic orientations are defined as follows:

1. *Egocentric.* This orientation includes concepts which are based on the individual's personalized, affective classification of a group of stimuli

and/or the inclusion of the individual as part of the grouped stimuli. That is, the individual uses his personal reactions to the stimuli or his personal characteristics in arriving at a basis for conceptualization. As an example for this and succeeding definitions, let us suppose that a hypothetical subject is viewing the hotel lobby at an APA convention and is asked either to select out groups of similar stimuli (as in a sorting task) or to describe what he sees (as in a TAT or Rorschach test situation). Examples of egocentric concepts would be "people I like," "people who scare me," "people who like me," "people wearing the same shoes I am wearing." Egocentric concepts, it should be noted, would usually be classified as private by McCaughran and Moran.

2. *Stimulus centered.* In this alternative orientation the concepts are based on aspects of the external stimulus, and the individual's personal traits or feelings are not used as the basis for categorization, e.g., "men," "couples," "active bellhops," etc.

Under each of these two basic orientations there are *three* additional formal conceptual categories. These three are defined as follows:

a. *Descriptive.* This category includes concepts which are based on similarity in objective, physical attributes among a group of stimuli. The physical attributes can refer not only to the usual physical concepts of hue or light intensity but to any attributes which are objectively present in the stimulus configuration (state of dress, people's postures). In a descriptive concept, the label always contains a reference to an objective, physical attribute of the grouped stimuli. In the schema of McCaughran and Moran, the descriptive concept would always be public. Examples of descriptive concepts would be "coatless people," "red hats," "people holding books," "black floor tiles," "men with brass buttons."

b. *Categorical inferential.* This category includes concepts which are not directly based on any objective, physical attribute of the stimuli. Categorical inferential labels do not contain a direct reference to an objective, physical attribute of the group of similar stimuli. In addition, in an inferential concept, as in a descriptive one, any stimulus in the group is an independent instance of the conceptual label. For McCaughran and Moran, inferential concepts may be either public or private, depending on their content. Examples of inferential concepts would be "professional men," "polygons," "organic compounds," "confused people."

c. *Relational.* This category includes concepts which are based on the functional relationship between or among stimulus members of a group. This functional relationship can involve temporal, spatial, or interobject relationships among the stimulus members. In this category, no stimulus is an independent instance of the concept and each stimulus derives its meaning from its relationship to other stimuli in the group. For McCaughran and Moran, relational concepts could be either private or public, depending on their content and the stimulus configuration. Examples of relational

concepts would be "people at a symposium," "a family," "a married couple," "an exhibit."²

Thus, within either the egocentric or stimulus centered orientations, an individual has three ways to organize and label stimuli: (a) to select similar objective elements and use a descriptive label, (b) to abstract common elements and infer a more inclusive label, or (c) to functionally relate a group of stimuli.³ There is one major difference between the present scheme and that of McGaughran and Moran. In the present system categorical inferential and relational concepts are viewed as independent while McGaughran and Moran would consider them similar if their contents were both public or both private. The empirical data to be summarized indicate that these two categories are statistically independent.

For each of these formal categories, there are content categories which describe the substantive meaning of the concept. That is, conceptual labels can refer to color, texture, type of dress, moral evaluation, shape, size, families, crime, age, motive, social roles, ideational or affect states, etc. Thus, any one conceptual response is classified in three ways: (a) egocentric *vs.* stimulus centered; (b) descriptive, categorical inferential, or relational; and (c) according to its substantive meaning. The remainder of this paper is concerned with a stimulus centered, categorical inferential concept with a specific content—the concept of "affect state." The data to be presented indicate that this specific conceptual label shows intra-individual consistency across different stimulus situations and promise of construct validity. The construct involved is "the behavioral tendency to categorize

² Relational concepts differ from descriptive concepts with respect to the part-whole analysis of the stimulus. In relational concepts, each stimulus in the group retains its complete identity. In descriptive concepts, the S selects from each stimulus a specific element which has something in common with an element in other stimuli. Thus, in forming a descriptive concept the S usually separates figures (the element of similarity) from ground (the irrelevant aspects of the stimulus). In a relational concept the entire stimulus is figure and there are no background elements. For example, in the descriptive concept "people with shoes on," the crucial stimulus element is the presence of shoes, while the remaining aspects of the stimuli are disregarded. However, in the relational concept "a family," all aspects of each stimulus member are relevant for the concept. Thus, descriptive concepts involve an active, conceptual analysis while relational concepts seem to involve a passive acceptance of the entire stimulus rather than a clear-cut separation of figure from ground. This dichotomy resembles the distinction between "levelers" and "sharpeners" made by Holzman, Gardner, and Klein (10, 12).

³ These categories bear some similarity to the schema described by Bruner, Goodnow, and Austin (3). They initially defined two broad conceptual categories: "identity" and "equivalence." Their identity category resembles the present definition of the descriptive concept. The equivalence class contains the three subcategories of affective, functional, and formal, which resemble the present categories of egocentric, relational, and categorical inferential, respectively.

people in terms of affect or feeling states." We suggest that measures of this construct bear a positive relation to awareness of affect states, motives, sources of anxiety, and the ability to discuss the self and others in concepts dealing with motives and affect states. Thus, the theoretical properties of this construct are closely related to the concept of repression, e.g., the "after-expulsion" of conflictful ideas.

The present study deals with the consistency of the tendency to apply affect labels to four different classes of stimuli. Three of the measures directly involve the use of affect labels in categorizing humanlike stimuli, i.e., the ascription of affect states to TAT and tachistoscopically presented figures, and the grouping of human figures on the basis of similarity in affect state. The fourth measure is the production of human movement responses to ink blot stimuli. The rationale for the inclusion of this latter variable with the other three follows. Previous research (2, 16, 26, 28) suggests that human movement responses are produced by individuals who use affect language, tend to think about their problems, and tend to be introspective. Since human movement responses often involve the ascription of goal related activity to ink blot human figures (people eating, people snuggling, people fighting, people dancing, people kissing), it is possible that this response reflects a prepotent tendency to interpret the environment in terms of human motives. A motive is defined by McClelland (19) as "an anticipation of a change in affect state." This definition suggests an intimate connection between the conceptualization of the social environment in terms of human motives and affect states. When an individual feels afraid, happy, sad, or mad, there are cognitive anticipations of incentive or goal states associated with these feelings. Similarly, when one anticipates certain goal states, both the anticipation of a goal related affect and the experiencing of any affect which is associated with deprivation of the goal occur. Thus, affect states and goal related actions are psychologically linked.

Since the nature of the ink blot stimulus precludes the ascription of affect states to human percepts, it appeared to us that ascription of action to ink blot humans would be analogous to the use of affect labels with TAT figures. Thus, we believed that (a) ascription of affect states to both TAT and tachistoscopically presented figures, (b) sorting of human figures on the basis of similarity in affect state, and (c) ascription of activity to humanized ink blot figures would all be positively related to each other, i.e., show intra-individual consistency.

Since previous research suggested a relation between an introspective attitude and both human movement responses and use of affect language (14, 16, 28), it was decided to study the relation between each of the four measures of affect labeling and interview-based ratings of introspectiveness, i.e., a subject's ability to talk of his motives, conflicts, and sources of anxiety. It was assumed that individuals who used affect labels in the formal test situations would also use concepts describing their feelings and motives when

talking about themselves. Finally, since conceptual styles might be associated with quality of intellectual behavior, the relationship between IQ and these conceptual response tendencies was explored. In this case, no specific predictions were made.

STUDY A

Method

Subjects

The subjects (Ss) were 58 adults (34 males and 24 females) from the Fels research population. The age range of this group was between 19 and 29 years of age, with a median age of 25. The mean Wechsler-Bellevue IQ of the group was 120, and all IQ's were average or above (IQ range of 98-138). The Fels sample represents psychologically "normal," middle-class families residing in southwestern Ohio. About one-half of the adults had some college training and included professional and agricultural people, tradesmen, and laboring groups. The data obtained from these Ss were gathered as part of a larger assessment program.

Procedure

The procedure for all Ss was constant. Initially, all Ss were interviewed by the senior author for approximately five hours. The interview sessions followed a standard interview schedule and were usually completed in two sessions, although occasionally, a third session was required. Following the interview sessions the interviewer rated each S on a series of variables (7 point scale), one of which was called "introspectiveness." Introspectiveness was defined as the "ability to talk about motives, conflicts, and sources of anxiety." The ratings were made with no knowledge of S's background history or test protocols. The test information was gathered in subsequent sessions, and this report deals with ten test scores derived from five instruments: (a) a modified Rorschach, (b) a 13 card TAT, (c) a figure sorting task, (d) a tachistoscopic experiment and, (e) the Wechsler-Bellevue Intelligence Scale. The modified Rorschach was administered in Session 1; the TAT in Session 2; and the three remaining tests in Session 3. The order of administration of the third session was complex and will be described in a later section dealing with the administration of the figure sorting task. The interviews and test sessions were separated by periods ranging from one week to six months with a modal intersession interval of one month.

Administration and Scoring of Tests

Modified Rorschach movement responses. For this research, a series of 32 modified Rorschach stimuli was devised in which part of the original Rorschach ink blot was covered with a template, leaving a common D or d area visible to the S. Description of these areas appears in a separate report (13). The Ss were instructed to give one response to each stimulus, and,

since rejects were rare, most Ss furnished 32 responses. The responses were scored for human movement (M), animal movement (FM), and inanimate movement (m). However, the occurrence of inanimate movement was infrequent, and only the data for human and animal movement percepts are presented here.

Weighted TAT affect. This score is based on the ascription of an affect or feeling state to TAT figures in a 13 card protocol. The males were administered Cards 4, 8 BM, 7 BM, 6 BM, 12 M, 17 BM, 13 MF, 14, 3 BM, 5, 1, 3 GF, and 18 GF. The females were administered Cards 4, 6 GF, 12 F, 2, 8 GF, 17 BM, 13 MF, 14, 3 BM, 5, 1, 3 GF, and 18 GF. All stories were electrically recorded and transcribed verbatim. The S was given a positive score for a picture if he attributed *at least one* feeling or affect state to any figure on the pictures. The most frequent affect labels were mad, tired, happy, proud, excited, exhausted, angry, sad, unhappy, surprised, lonely, remorseful, grief stricken, and afraid. No extra score was given if the S used more than one affect word in any one story. Some of the pictures had a much greater tendency to elicit affect language than others, and a separate weighting procedure was used for the male and female series of pictures. The four TAT pictures with the greatest tendency to elicit affect labels were given a score of 1, the four with the least tendency to elicit affect labels were given a score of 3, and the five with a moderate affect pull were given a weight of 2. The S's weighted affect score was the sum of his weights for all 13 pictures.

Tachistoscopic affect score. This score was based on the ascription of affect states to tachistoscopically presented pictures. In this part of the experiment, the S was shown a series of 14 line drawings of people in various situations. The pictures were presented at seven different exposure speeds ranging from .01 to 1 second. The pictures were first shown at the fastest exposure and each succeeding series at progressively longer durations. All exposures were above threshold and all Ss reported seeing something at each exposure. The S sat 22 inches from a flash-opal milk glass screen; the image was projected from the back of the screen. A constant illumination of 30 foot-candles was produced at the screen. The S was not told to make up a story but to state for each picture (a) the sex of the figures, (b) their approximate ages, and (c) what each person in the picture was doing. The instructions were intended to orient the S to report objective facts about the picture rather than inferences about the motives or affect states of the figures. The S was given three practice pictures to adapt him to the task and its requirements, and the entire protocol was electrically recorded and transcribed verbatim. The tachistoscopic affect score was the number of pictures (98 in all) in which an affect or feeling state was ascribed to a figure.

Figure sorting affect. The third affect labeling measure was derived from a figure sorting task. Three arrays of cardboard human figures were

used, some of which were taken from Shneidman's *Make-a-Picture-Story Test* (27), and each array contained 22 figures.

In the third test session, the S was presented initially with Array 1 and given the following instructions:

"We are now going to show you a group of human figures that are arranged in no special order. We would like you to pick out one group of figures that go together on some common basis, any basis you like. Just pick out a group of figures that go together on some common basis and tell us the basis upon which you grouped these figures."

After the first sort, the figures selected were replaced in the original array and the S was asked to produce another group of figures that went together on a different basis. This procedure was repeated until the S produced six different sorts. Following an interpolated task (the French Insight Test), the S was presented with Array 2 and asked to produce six more sorts. The S was then administered the tachistoscopic experiment described above and this was followed by a coffee break. Then the S was presented with Array 3. For Array 3, the S was instructed to divide the group of 22 figures into two piles on the basis of one concept. After the S repeated this task four times, the Wechsler-Bellevue Scale and Hanfmann-Kasanin tests were administered. The S was then presented with Array 1 again and asked to produce six more conceptual groupings. Finally, Arrays 1 and 2 were pooled, and the E selected one figure from the pooled group. The E then asked the S to select out all the figures that he would classify with the one the E had selected. This procedure was then repeated for ten different figures. The entire figure sorting procedure resulted in a total of 32 conceptual responses, and these responses were scored for the conceptual categories defined earlier and a variety of content categories.

In this report we are only concerned with the number of stimulus centered, categorical inferential concepts in which the grouping of figures is based on similarity in affect states. Some typical examples are: "These figures are all happy"; "these are all mad"; "these are all remorseful."

In order to demonstrate that categorical inferential concepts involving "affect states" had a special relation to the other affect label measures (TAT and tachistoscope), the figure sorting data were also scored for (a) categorical inferential concepts which did not involve similarity in affect states, (b) relational concepts, and (c) descriptive concepts. (Egocentric concepts were infrequent and were omitted from this analysis.) The definitions for these categories were given earlier and some typical examples of these three categories were presented. Abstract inferential concepts usually involved similarity in behavior, function, role, class, or attribute: "These people help others"; "these people are productive"; "these are all professional men"; "these are all handicapped"; "these are criminals"; "these are servants." Relational concepts involved similarity based on a functional or temporal

TABLE 1
INTERCORRELATIONS AMONG CONCEPT SCORES, INTROSPECTIVENESS, AND IQ

	M	FM	TAT	Tach.	F. S. Aff.	Intro.	V. S. IQ	P. S. IQ	F. S. Infer.	F. S. Desc.	F. S. Relat.
Ror. M	—	.14	.50	.31	.35	.33	.40	.40	-.27	.10	-.21
Ror. FM	.44	—	-.04	.04	.31	-.17	-.30	-.19	.04	-.10	-.10
TAT Affect	.70	.64	—	.40	.43	.47	.39	.42	-.12	.09	-.21
Tachist. Affect	.45	.41	.38	—	.81	.32	.35	.43	-.08	-.26	-.07
Fig. Sort. Aff.	.63	.22	.48	.42	—	.16	.20	.36	.10	-.36	-.27
Introspect.	.68	.43	.66	.64	.58	—	.62	.43	-.27	.45	-.02
V. S. IQ	.62	.24	.56	.57	.48	.62	—	.70	-.27	.47	-.21
P. S. IQ	.55	.30	.30	.26	.18	.43	.56	—	.15	.29	-.28
Fig. Sort. Infer.	-.11	.15	-.29	-.10	-.22	-.15	.10	-.04	—	-.44	.07
Fig. Sort. Desc.	.01	-.03	.30	-.24	-.09	.13	.23	.28	.01	—	-.35
Fig. Sort. Relat.	-.15	-.14	-.09	.37	-.06	-.10	-.09	-.19	-.14	-.64	—

Note.—For the males (right side of diagonal) a correlation of .33 is significant at $< .05$ and a correlation of .43 at $< .01$ (two tails). For the females (left side of diagonal) a correlation of .40 is significant at $< .05$ and a correlation of .51 at $< .01$ (two tails).

relationship among the figures in the group: "This is a family"; "this is a mental hospital scene"; "these are the states of a person's life"; "this is a wedding scene"; "this is a dating scene." Descriptive concepts involved similarity in objective, physical aspects of the stimulus: "people holding things," "people with hands out," "people in uniforms," "bald people," "people with no shoes on." For the present analysis, responses which involved the concepts male, female, old, and young were excluded. Occurrence of these responses, however, was positively related to occurrence of the descriptive response category.

Wechsler-Bellevue IQ. All Ss were administered eight subtests from the Wechsler-Bellevue Intelligence Scale—Form I (information, comprehension, Kohs blocks, digit substitution, similarities, arithmetic, vocabulary, and picture completion). The data with which we are concerned deal with two IQ scores: the Verbal Scale and pro-rated Performance Scale IQ.

The measures derived from the modified Rorschach, TAT, tachistoscope, and figure sorting tasks were independently scored by two scorers who had no knowledge of the Ss' performance on the other protocols. The percentage of agreement was above .90 for each measure. The inter-rater reliability (product moment correlation) for the rating of introspectiveness was .82.

Results

The mean scores for each of the eleven variables were computed for the males and females. Only the TAT weighted affect score resulted in sex differences, with the female having the higher mean score ($p < .05$, two tails). The TAT was the only task in which males and females responded to different stimuli, and more of the pictures in the female series elicited affect language.

Table 1 presents the product moment correlations for men and women among the following eleven scores: (a) Rorschach M, (b) Rorschach FM, (c) weighted TAT affect, (d) tachistoscopic affect, (e) figure sorting affect, (f) introspectiveness, (g) Verbal Scale IQ, (h) Performance Scale IQ, (i) figure sorting categorical inferential-non affect, (j) figure sorting descriptive, (k) figure sorting relational. The correlations for the men appear on the right and above the diagonal of the matrix; the results for females are on the left and below the diagonal.

The correlations reveal a significant degree of intra-individual consistency in the use of affect labels for the TAT, tachistoscopic, and figure sorting tests. For the males, the correlations among these three tests were .40, .43, and .81; for the females they were .38, .48, and .42 (five of the six correlations were significant at or below the .05 level, two tails). Five of the six correlations between human movement and each of the three affect scores were also statistically significant ($p < .05$), with the correlations slightly higher for women than for men. Since there were marked

differences in both stimulus material and response process between the use of affect labels on the TAT or tachistoscopic task and the ascription of action to humanized ink blot figures, this response tendency has generality across tasks. Further, animal movement was not as consistently and significantly associated with the use of affect words as was human movement. This result suggests that the human element in the movement response is of major importance.

Only the categorical inferential concepts which involved similarity in affect state on the figure sorting task showed a significant correlation with human movement, weighted TAT affect, or tachistoscopic affect. Categorical concepts not based on similarity in affect (figure sorting categorical inferential) showed a slightly negative correlation with the three affect and human movement scores. Similarly, figure sorting descriptive or relational concepts failed to show any positive correlation with human movement, TAT affect, tachistoscopic affect, or figure sorting affect scores. Finally, it is of interest to note that the categorical inferential and relational figure sorting categories were statistically independent, while the descriptive and relational categories were inversely related. As predicted, the interview ratings of introspectiveness were positively associated with the affect measures.

STUDY B

Because of the high degree of consistency among the three affect and human movement scores, and because of the speculative nature of the hypothesis which accounts for the association between human movement and affect labels, a specific experiment was devised to further test the relation between human movement and the tendency to conceptualize stimuli in terms of affect labels.

Method

Subjects and Procedure

The Ss were 30 male and 33 female Antioch College undergraduates. The Ss were divided into two groups ($N=31$ and 32)—males and females in both groups—and each group was administered the modified Rorschach and a concept formation test in one session.

Administration and Scoring of Tests

Modified Rorschach. Colored slides of the modified Rorschach stimuli used in Study A were flashed on a screen in front of the group, and the Ss were instructed to write down what the stimulus "looked like to them." Each stimulus was on the screen for 20 seconds and the Ss were allowed ten extra seconds to write down their responses. The protocols were scored for human movement responses.

Concept formation test. Following the administration of the modified Rorschach, the Ss were presented with a pamphlet which contained six separate lists of words. The lists varied from 15 to 17 words in length and there was one list on each page. Ss were given the following instructions:

"On the following sheets there are six concept formation tasks. There will be one practice list followed by the six test ones. In each test there will be listed a series of words on the left side of the page. Your job is to fit these words into four concepts: that is, to group all of the words into four different groups with each group of words going together on some common basis. After you have done the grouping, write the definition or basis for each concept in the space provided. The number of words in each of the concept groups does not have to be equal. Beside each word in the list, write the letter A, B, C, or D, indicating the concept to which the word belongs. You will be allowed three minutes for each list."

Each list was devised so that one of the concepts in each of the lists was an affect or feeling state. The remaining three concepts in each list did not involve an affect state. The data were scored for number of correct lists. A correct list was defined as the grouping of all the words involving an affect state and the use of a conceptual label which described a feeling, mood, or affect. An example of one of the lists follows:

- | | | |
|-----------|--------------|---------------|
| 1. ROUGH | 6. RESENTFUL | 11. IRRITATED |
| 2. MILE | 7. FILE | 12. INCH |
| 3. ANGRY | 8. PIMPLY | 13. PILE |
| 4. SMOOTH | 9. OUNCE | 14. MAD |
| 5. TILE | 10. YARD | 15. STRIATED |

In this list the affect concept was composed of words 3, 6, 11, and 14 (angry, resentful, irritated, and mad). A correct response would be the grouping of these four words under one concept and labeling this group of words with an affect concept, e.g., "anger," "madness," "negative emotion," "bad feelings," "unpleasant emotion."

Results

The Rorschach human movement distribution was divided into low, middle, and high groups, and the mean number of correct lists was computed for these three groups. The results revealed a positive and linear relation between human movement and the number of correct lists for both sexes, and when the low movement group ($N=22$) was compared with the high ($N=20$), there was a significant difference between the number of correct lists ($p<.05$, one tail). There was no significant difference between Ss high or low on human movement with respect to number of lists finished or number of correct lists for nonaffect concepts.

STUDY C

Since the tendency to use affect labels in categorizing social stimuli showed moderate consistency across tests, it was decided to check on the stability of this response for TAT stories.

*Method***Subjects and Procedure**

From the research files of the Fels Institute, 26 male Ss were selected (half of whom were in Study A) for whom two, seven card TAT protocols had been obtained between 8 and 15 years of age. For any one child, the time lapse between the two protocols was never greater than two years and in most cases it was 10 to 12 months. That is, there were 26 subjects who had two TAT protocols within 24 months of each other. The age range of the entire group was 8 to 15 and the modal age range was 8-6 to 10-6. The seven TAT cards used were 3 BM, 5, 14, 3 GF, 1, 6 BM, and 17 BM, and the protocols were scored for ascription of affect states to TAT figures. The final affect score was a weighted one and was obtained by assigning a weight of 1 to Cards 3 BM, 5, and 14; a weight of 2 to Cards 3 GF and 1; and a weight of 3 to Cards 6 BM and 17 BM.

Results

The product moment correlation between the two weighted affect scores was .44 ($p < .05$, two tails). Previous research (13) has demonstrated that human movement responses also show a significant degree of stability during adolescence. Data on 37 males who were administered the ten standard Rorschach stimuli at median ages of 10-8, 13-8, and 16-6 revealed that human movement showed a significant degree of stability across all three administrations. The reliability coefficients for human movement (expressed in phi coefficients) were .55 ($p < .01$, two tails) for the relation between the protocols at 10-8 and 13-8; .47 ($p < .01$) for the protocols at 10-8 and 16-6; and .40 ($p < .05$) for the protocols at 13-8 and 16-6. For animal movement the correlation was .44 for the two early protocols ($p < .01$) but only -.08 and .24 (nonsignificant) for protocols 1-3 and 2-3 respectively. None of the stability coefficients involving human imagery without movement were significant (phi coefficients were .25, .12, and .27). Since human movement showed a significant degree of intra-individual stability over a six-year period while human imagery did not, it would seem that the ascription of action to human figures is more significant psychologically than the ink blot perception of humans without an action component.

Thus, human movement and TAT affect responses show a significant degree of stability during adolescence and moderately high correlations with each other in adulthood.

Since human movement was stable during adolescence and associated with adult ratings of introspectiveness, it was decided to analyze the pre-

dictive power of the human movement score obtained in adolescence, to the adult interview rating of introspectiveness. The Ss in this analysis were 28 of the 34 males in Study A.

Each of the Ss had two standard Rorschach protocols at median ages of 10-5 and 13-5 and all of these Ss were seen for the five hours of individual interview described above. The two adolescent protocols were scored for human movement, and the number of human movement responses for both protocols was summed. The distribution of human movement responses was divided into three groups: Ss with *no* human movement responses ($N=11$); Ss with *one* response ($N=6$); and Ss with *two or more* responses ($N=11$). The mean interview ratings on introspectiveness were then computed for the three groups. The mean ratings on introspectiveness for the low, middle, and high movement groups were 2.7, 3.5, and 4.5 respectively. The difference between the Ss with *no* movement responses *vs.* those with *two or more* was statistically significant ($p<.01$, two tails). Human movement responses gathered in early adolescence were predictive of the assessed ability to talk about motives and feelings in adulthood, ten years after the ink blot percepts were obtained.

DISCUSSION

The tendency to conceptualize stimuli symbolic of the social environment in terms of affect labels shows a significant degree of intra-individual consistency. The fact that the three direct indices of affect labeling correlated with human movement and introspectiveness gives an important dimension of generality to this behavior. This consistency, together with the demonstration of a significant degree of stability during adolescence for TAT affect and human movement, suggests that this response is not a transient or stimulus specific verbal habit. Rather, it would appear that this behavior is related to theoretically relevant variables in personality.

One of the implications of these studies is the possibility that these variables may be refined to yield potentially sensitive measures of the construct of repression. Repression is defined as the "nonavailability of thought material to verbal report." Since repressed material is usually anxiety arousing, we commonly assume that conflictful thoughts are most apt to be repressed. The measures utilized here, especially TAT affect and human movement, are predictive of the tendency to think about the self and others in concepts dealing with motives and conflicts. This behavior should be characteristic of the S who would not use repression as a primary defense against conflictful ideas. The positive correlation, for men, between figure sorting descriptive responses and introspectiveness is difficult to explain. Since descriptive and affect sorts were uncorrelated, it would suggest that, for men, different conceptual styles are associated with an introspective attitude. It is suggested that men who are high on descriptive responses would be classified as "sharpeners" with the techniques used by Holzman

(9).⁴ Since Holzman and Gardner (10) suggest an inverse relation between sharpening and repression, this result may be congruent with their findings.

Current research supports this hypothesis of an association among human movement responses, affect labels, and awareness of conflict and affect states. Cox and Sarason (4) found a positive association between movement responses and the tendency to be aware of the affect state of anxiety.

Bieri and Blacker (2) reported that male college subjects who perceived people in a highly differentiated fashion on the Kelly Repertory Test (15) gave more human movement responses than subjects who did not see people in a differentiated fashion. Thus, males who are able to apply a wide variety of personality related labels to other people were more likely to produce human movement responses than subjects unable to differentiate people on personality dimensions. It would seem plausible to assume that the latter group, with a stereotyped perception of people, have either a minimal availability of, or weak behavioral tendency to use, labels describing motives and affect states.

Singer *et al.* (28) intercorrelated both Rorschach scores and a variety of other variables derived from the protocols of 100 male schizophrenics. Four factors were extracted from the intercorrelations, one of which was called introspectiveness. This introspective factor had high loadings on human movement, the attribution of affect and motive states to TAT figures, and admission of anxiety following failure. Additional support for the current hypothesis comes from a study (16) in which neuropsychiatric patients were administered Rorschachs and then interviewed and rated on a variety of variables. The subjects high on human movement, as compared with those low, were more likely to (a) attribute their problems to interpersonal relations, (b) associate past childhood events with their problems, and (c) utilize interpersonal fantasy of the problem solving type in dealing with their emotional problems, i.e., think about their motives, conflicts, and feelings.

It seems likely that this construct, i.e., conceptualization of self and others in terms of affect and motive states, has relevance for prognosis in therapy. Therapists agree that when the patient has language symbols available to describe his feelings and conflicts, i.e., lack of repression, prognosis for therapy is enhanced. Affleck and Mednick (1) have reported that production of human movement responses characterizes those who are not early terminators in therapy.

One final question relevant to these results involves the relation between use of affect labels and measured intelligence. Table 1 reveals that TAT affect, tachistoscopic affect, and human movement showed positive correlations with Wechsler-Bellevue Verbal Scale IQ for both sexes. Performance Scale IQ was correlated with these affect measures for men, but not for

⁴ In a recent perceptual vigilance experiment with college males, there was a significant, positive correlation between descriptive figure sorting responses and accurate performance in a simple visual detection situation.

women. However, when the variance due to IQ was held constant, the correlations among these three measures remained significantly positive. For example, the partial correlation between TAT affect and M, with Verbal Scale IQ held constant, was .40 for males ($p < .05$, two tails) and .53 for females ($p < .05$, two tails). Thus, for this sample of people with average or above IQ's the tendency to apply affect labels is not merely a consequent of high intelligence.

SUMMARY

This paper presented a scheme for ordering conceptual sorting behavior. It also summarized a series of studies bearing on the intra-individual consistency and construct validity of a specific conceptual response: the use of affect labels in describing and categorizing social and ink blot stimuli.

In the major study, 34 adult males and 24 adult females were administered a modified Rorschach, a TAT, a figure sorting task, and a picture recognition task in which pictures were tachistoscopically presented at seven different speeds. The results revealed that the following four measures were positively intercorrelated: (a) human movement on the Rorschach, (b) ascription of affect states to TAT figures, (c) ascription of affect states to tachistoscopically presented figures, and (d) the classification of human figures into conceptual groups based on similarity in affect states.

Each of the above variables was positively related to an interview based rating of introspectiveness, i.e., ability to talk about motives, conflicts, and sources of anxiety.

The human movement and TAT affect scores showed long-term stability during childhood and adolescence, and human movement responses produced in early adolescence were predictive of an introspective attitude in adulthood.

It was suggested that this conceptual style was associated with the non-repression of conflictful ideas.

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SOME FUTURE DIRECTIONS FOR DEVELOPMENTAL RESEARCH ON PROBLEMS OF COGNITION

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The preceding papers have discussed various aspects of the complex and challenging problem of cognitive functioning and development. The papers are intentionally disparate in their focus and, in so being, find appropriate breadth and extensity to the problem. This seems to me to be a worth-while approach for a symposium attempting to direct attention to different kinds of interests and researches currently going on in this very broad field.

My task is not to discuss the details of the specific papers but rather to view them in the perspective of future research. Before doing this, however, it is interesting to note the resurgence of interest in cognitive development and functioning. Development of thought, reasoning, conception of the physical and moral world is being studied by increasing numbers of psychologists. Piaget's influence, for example, is beginning to take hold, and the impact of Werner's work and thought is becoming apparent.

For those of us with a long-time interest in problems of intellectual functioning, it is reassuring to see such activity (9). For child development in particular, this renewed activity has increased interest in a relatively uncharted area of growth. The preceding papers reflect this activity to which I refer, yet each provides independent lines of thought and research, investigating various aspects of the problem. Dr. Gollin provides a developmentally oriented conceptual scheme and experimental procedures whereby performance trends in cognition can be more clearly and completely understood. Dr. Kagan's study of generality and consistency of affect labeling indicates some of the critical questions of stability and organizational tendencies across situations and time.

From these papers, several problem areas emerge as focal points of emphasis in future research. For discussion purposes, these areas may be classified according to their implications for theoretical, methodological, and applied issues.

One of the primary and knotty theoretical problems facing developmental psychologists is the achievement of an adequate conceptualization of development. If development is viewed as change through time, and if the assumption of developmental stages is held, then it becomes critical to identify and explain the movement of the organism from stage to stage. Characterization of the behavioral properties (descriptive-narrative) of each

stage is not sufficient. We must be able to identify the developmental processes which account for transition from stage to stage as well as the precursors of particular developmental changes. By so doing we can determine the progress the individual is making and assess the rate of movement. Predictions should be improved with such detailed knowledge.

There are some developmental theories which provide us with a framework within which to work. Piaget (7) has spelled out in many volumes the stages appearing sequentially in the development of various intellectual activities, e.g., space, number, chance, etc. Freud has also provided us with a developmental schema in which psychosexual stages (changes in object relations) are defined. Rapaport (8) has recently worked on systematization of the Freudian developmental model. Werner (12) has offered a third scheme by which cognitive development can be ordered and has provided numerous suggestions for empirical study.

We do not have any integration of these various conceptual systems. While formal integration may not be possible, more attention to this problem should prove fruitful for acquiring further systematic knowledge concerning the emergence of various types of functions and their *interdependence*. What is the relationship, for example, between Freud's psychosexual stages of development and the development of language and thought as proposed by Piaget? (Assuming the validity of each, of course.) Attempts to answer such questions as this would provide a stimulus for integrating the individual streams of thought, and would, perhaps, eventually provide the data and concepts necessary for a more complete theory of development. We are aware that the channels of development are not independent, but interdependent. Thus one might examine the relationship between particular rates of psychosexual growth and of language. Something of this type has been reported by Peller (6) in her analysis of children's play.

Related to the integration of various conceptual systems is the problem of definition of the concepts employed, particularly in discussions of cognition. Leaving the knotty question of what "cognition" is, let us examine what is concrete and what is abstract thinking. Werner (12), for example, proposes that abstract thinking occurs at various levels and should be thought about in analogous terms; Goldstein (4) describes abstract and concrete thought in a framework which indicates these are independent dimensions and attitudes; Terman (10), on the other hand, defines intelligence as the ability to think abstractly. The task before us is to develop a more standardized nomenclature for our concepts to avoid conceptual confusion and obfuscation.

Incidentally, it should be noted that Dr. Kagan in his paper avoided such terms as "abstract" and "concrete," even though the types of behavior he was describing could well be classified by such terms. He proposed instead concepts like "descriptive" or "relational" which are defined on the basis of properties of a stimulus that are included in a label given to

an arrangement of stimuli. The similarity, if any, between Dr. Kagan's terminology and that of, for instance, Goldstein has yet to be determined.

In addition to the need for integration and definition, we also have to begin to think in theoretical terms about the relevant conditions which influence the direction and quality of developmental processes of thought. Dr. Collin provides some concepts and data in regard to this problem by using a comparative-developmental approach. Dr. Kagan, on the other hand, takes some of the more traditional psychological variables, e.g., motive states, and examines the relationships between them and cognitive orientation. From sources other than the symposium participants, we also find efforts to more broadly define relevant variables of cognitive functioning. Erica Fromm *et al.* (3) provide a dynamic view of intelligence, and handle, on a conceptual level, questions of intelligence testing and ego functions as well as intellectual functions embedded in the personality structure of the individual. Such orientations as these move away from the rather limited and isolated view of cognitive functions operating independently of the personality.

This is not to say, however, that we have the answers to many of the more traditional questions of cognition. There is considerable need for research emphasizing the processes involved in cognitive activity. For example, the problem-solving behavior of children requires further investigation, cross-sectionally and developmentally outside the context of personality. Studies like those of Duncker (2) must be done with children. Bloom (1) at the University of Chicago, in studying problem-solving behavior among college students, used an ingenious introspective and recall method which tended to illustrate the variety of mental activities that go on while a person is solving a problem. It might well be possible to also repeat some of Bloom's work with young children. The descriptions of intellectual activity occurring during problem-solving situations, reported in such studies, provide us with a more complete understanding of the psychic events operating while individuals are attempting to solve problems.

Another problem highlighted by Dr. Kagan's paper on cognitive style is its relevance for cognitive operation. If we think of cognitive style as a predisposition to organize stimuli, how does this disposition influence the individual's efficiency in problem solving, for example? Studies of this problem could shed light on the immediate antecedents of cognitive operation. Further, such research undertaken from a developmental point of view could increase our understanding of the intricate relations between style and operation: For example, are certain cognitive processes prerequisite for some styles at particular points along the developmental route?

Developmental psychologists have been greatly interested in the parent-child relationship. In fact, current personality theory places great emphasis on this relationship as a basic influence in many subsequent functions of the individual. There is every reason to suppose that the development of cognition of an individual is affected by his experience with his parents. Children

are generally assumed to move from a concrete approach to the world (dealing with the immediate, unable to deal in abstract terms) to a more abstract and conceptual one. If this is the case, to what degree do child-rearing experiences influence the course and the content of such maturation? How do parents, by their relationship and behavior with their children, accelerate or inhibit the child's movement toward more conceptual modes of thought? How does the home atmosphere influence the child's orientations toward exploring and seeking explanations for various phenomena? Intimately connected with these questions is the role of the parent in emphasizing the child's approach to the identification and solution of problems. Using Dr. Kagan's terms, we might ask: How do parental actions or attitudes influence the child's use of labels in sorting tasks? Certainly, the effect of the parent-child relationship on the child's cognitive functions has yet to be sufficiently explored.

Other antecedents of the child's cognitive development need to be studied, such as school training, informal learning experiences, and broader sociocultural pressures.

In addition to focusing on development of children, we could assess changes during adulthood. After all, development is an ongoing life process. Dr. Collin's child-adult comparisons are a type of investigation that moves in this direction.

Let us turn now from the theoretical problem to that of methodology. We have tended to use various kinds of tasks, such as sorting tasks, syllogisms, learning discriminations, and others. All of these methods pose numerous problems which certainly must be investigated. However, it seems that any methodological progress in this area is contingent upon theoretical progress in the field. Unless we can enhance the clarity of our theoretical formulations, methodological advances are dubious. For example, considerable work has been done in the field of intelligence testing. We have developed highly sophisticated statistical modes of analysis to cope with problems of item analysis, etc. Yet we are all too painfully aware of the limitations of our intelligence tests for furthering our knowledge about the underlying intellectual processes. To be sure, through intelligence testing and the work done on factor analysis by Guilford (5), Thurstone (11), and others, we have postulated ideas about the basic intellectual factors. Nevertheless, we find that these kinds of instruments tend to shed relatively little light on the more basic problems of cognitive organization and cognitive efficiency. We are interested in more than just testing of intelligence as it is commonly considered, for we are increasingly aware that our intelligence tests do not give us a broad-spectrum base upon which to understand man's cognition.

Since methodology is so dependent on the nature of the problem, it seems premature to present any particular method; but rather it seems that we have to consider some of the methodological problems raised in the papers presented here.

Although application of research findings to other fields of endeavor is not seen as the primary function of the research worker, it seems that in this day and age, when considerable emphasis and attention is turned to education of children, research dealing with cognitive functions has a unique and important contribution to make. With increased interest in the search for talent, and increased concern with challenging our children intellectually through school curriculum, the kinds of information that developmental psychologists working with problems of cognition can obtain through research are of fundamental importance. If, for example, we should discover that certain intellectual processes emerge independent of commonly examined antecedent conditions and independent of personality variables, this would be of considerable import. On the other hand (and this may be a more reasonable expectation), we might find some of the antecedent factors that determine the kind and quality of cognitive operation and cognitive style that children possess. We might discover the degree to which our educational procedures or our parent-child practices tend to inhibit or accelerate the way a child tends to think. Such information would be of considerable value, then, in telling the educator what kinds of things children can master. Currently in many educational circles, for example, certain tasks are introduced at certain grade levels on the assumption that children of earlier ages cannot master such activities. This may be purely a rule-of-thumb decision based on very crude empirical evidence; whereas it may very well be possible that children can master certain kinds of conceptual material at an earlier period, provided certain preconditions are met. Research on this problem may well lead to pointing out what some of the preconditions and possibilities for the child's capacities are.

Let us briefly examine the implications of such research for pathology, for ego development, and for remedial or corrective activity. If we had increased normative data on the developmental processes in cognition, we would be in a much better position to understand deviancy. We would be able to establish certain kinds of bench marks denoting the progress and direction taken by a child's development, and, accordingly, we would have a firmer basis on which to assess the quality of a child's performance.

It is interesting to note that, among the many definitions of neurosis or psychosis, is the notion of the individual's reality judgment. Certainly, reality judgment is an aspect of the individual's cognition and one of the dimensions of cognitive operation with which many of us are concerned. This intimate relationship between affective states and cognitive operation suggests that studying them together would benefit both the clinician and the developmental theorist.

In general, then, we have here a complex problem which needs concerted energy on the part of many of us to unravel the many mysteries and problems that exist. The papers in this symposium have presented data which contribute further to our understanding of the phenomena under investi-

gation and which offer us certain new directions for research. Thus, when we look to the future we see so many problems that perhaps it will take an Einstein in psychology to integrate theoretically the various conceptual schemes, and the rest of us can follow along very comfortably, trying to attack pieces of this mammoth universe. On the other hand, the complexity of the problem, hopefully, will not deter concerted research efforts in this direction; for I think we have seen in these symposium papers the concern for a problem which has social import as well as scientific interest.

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